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ABSTRACT

This manual discusses school facility cleaning and maintenance from the expanded perspective of work management, physical assets management, and resource management. Work management encompasses the organization of work and personnel, scheduling of daily or routine duties and tasks, and handling of demand work. Physical asset management includes developing historical data relating to the facilities, updating and changing that data, managing facility assets, and providing asset accounting. Resource management includes identifying cleaning procedures, developing and maintaining a preventive maintenance program, supporting a full inventory and purchasing system, tracking in-house and outside service costs, and interfacing with the school district's financial management system. A reference section contains guidelines and forms for custodial equipment storage and care, including safety measures and employee management forms.
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Custodial Methods and Procedures Manual

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Custodial Methods and Procedures Manual

Third Edition, 2000

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ASSOCIATION OF SCHOOL BUSINESS OFFICIALS INTERNATIONAL

About the Author

Donald Johnson is currently Associate Professor in Educational Administration and School Business Management at Northern Illinois University. In addition, he serves as the Assistant Executive Director of Illinois ASBO and is a member of the ASBO International Editorial Advisory Committee. He is a retired superintendent of schools and previous to that was an assistant superintendent for business. His experience in educational administration and school business management has spanned 35 years.

Custodial Methods and Procedures Manual

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Fairview Elementary School, Fairfax Station, Virginia,
Margaret Scott, Ph.D., Principal.

Acknowledgements

The Association of School Business Officials International appreciates the professional services provided for students by custodian and maintenance personnel. An important piece of a student's educational program is the facility, or more importantly, the condition of the facility, where the instructional process occurs. Without the professional services provided by custodial and maintenance personnel, it is doubtful that the instructional program could be delivered in a suitable environment.

This manual is the third edition of *Custodial Methods and Procedures*. It builds upon the prior two editions by incorporating previous information with current topics and issues facing custodians, maintenance personnel and their supervisors. Some information is included from the prior two editions as the information remains unchanged in nature and continues to be acknowledged as a current practice or use. Added topics include a discussion about the use of computers, data libraries, and computerized maintenance management systems. Since the last edition, occupational safety and health, emergency preparedness, and employee evaluation have become frequent concerns for custodial and maintenance personnel. Sections on each topic have been included in this edition.

Special appreciation is made to members of the Maintenance and Operations Research Committee of the Association of School Business Officials for contributing to the finished edition. In addition to the many contributors to the previous two editions, special acknowledgement for contributions is made to George Klein, Directors of Buildings and Grounds, Northbrook School District 28, Northbrook, Illinois and the Illinois ASBO Operation and Management Professional Development Committee for their contributions to this edition.

Finally, a good reference to accompany this manual is *Good School Maintenance, 3rd Edition*. This monograph was prepared and published by the Service Associates of the Illinois Association of School Boards in 1996. It contains additional examples and forms for many of the custodial and maintenance items discussed in this manual. Further information can be obtained by writing the Illinois Association of School Boards at 430 East Vine Street, Springfield, IL 62703-2236.

Cautionary Note

The manual, *Custodial Methods and Procedures*, was prepared as a general guideline to be used in developing policies and procedures for custodial and maintenance personnel and operations. Local school districts should adapt these guidelines to their own policies, procedures, equipment, and facilities as appropriate and as recommended by their contracted service providers and material suppliers/manufacturers.

The Association of School Business Officials International, as well as the author and contributors to this manual, and their employing organizations, disclaim any liability or responsibility for the misuse of information contained in *Custodial Methods and Procedures, 3rd Edition*.

Introduction

Facility cleaning and maintenance services have evolved from traditional custodial methods and procedures. The broader classification stems from the many additional responsibilities, duties, and tasks of that support service function. This monograph will discuss this expanded area of responsibility in terms of work management, physical assets management and resource management.

Prior editions of this manual focused mainly on custodial cleaning and methods. This edition encompasses those items, but also adds components designed to assist the supervisors/managers of custodians in performing their duties. There is information for custodians as well as their supervisors that will help the custodial and maintenance operations have functional, clean and safe facilities to assist the delivery of the instructional program.

The term "school district" is used throughout this manual and is illustrative of a typical organization of schools. Different states and provinces will have other similar terminology such as school systems, school corporations, school parishes, and school cooperatives. The reader should make appropriate terminology differences between his/her state/province and the term "school district" contained within this manual.

Work management encompasses organization of work and personnel, scheduling of daily or routine duties and tasks, and handling of demand work. Physical asset management includes developing historical data relating to the facilities, updating and changing that data, managing facility assets, and providing asset accounting. Resource management includes identifying cleaning procedures, develops and maintains a preventive maintenance program, supports a full inventory and purchasing system, tracks in-house and outside service costs, and interfaces with the school district's financial management system.

Custodians are a very important part of the educational system. The basic reason for having school custodians is to ensure clean, safe, attractive, efficient, functioning facilities. If custodians exercise their responsibilities faithfully, conscientiously, and intelligently, the results will be most satisfying and rewarding. Students and their teachers will, as a result, gain the full advantage of the academic and technical facilities that our school systems offer, facilities where children can learn and teachers can teach, that encourage desired positive public relations. It is expected that custodians will become fully aware of and carry out their responsibilities in order that their part in the education system will be sound and effective.

Parents and the public feel competent to judge the appearance of a school building. In judging any school building, the basic criterion is good housekeeping. Poorly ventilated rooms and lavatories, dirty halls and a general state of untidiness are all negative influences. We should aim not merely to

pass, but to pass with honors. The custodian must make every effort to assure high standards consistent with the practices of the district.

Desirable characteristics of custodians — On many occasions, the custodian is the first and possibly the only employee in the building coming in contact with the public. In order to promote good public relations, the custodian should possess the following characteristics:

- Neatness in dress and personal appearance.
- Reliability and dependability.
- Diplomacy, courtesy, and willingness to be obliging to visitors.
- Maturity, honesty, and intelligence.
- Ingenuity, initiative and diligence.
- Good character.
- Acceptable personal habits.

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Work Management

School District Policy

Boards of Education should establish policies for custodial service and buildings and grounds maintenance. Policies in these areas provide standards for custodial and maintenance employees to maintain the school buildings and provide a good setting for the instructional program.

Sample school board policies from *Good School Maintenance* (Harroun, 35) follow.

Custodial Services

The schools of the district shall be maintained in a sanitary and attractive condition. To this end, an adequate staff of custodians and sufficient supplies and equipment shall be provided.

The custodial staff shall receive direction and supervision in the performance of its tasks. There will be an active inservice training program to increase effectiveness and to introduce new products and methods.

Maintaining a clean and orderly school building is not solely the responsibility of the custodian. All staff members need to be thoughtful and cooperative, not only in their own actions, but also in developing standards and habits on the part of pupils.

Buildings and Grounds Maintenance

The buildings of the school district represent a substantial investment by the community. They shall be maintained in condition by a continuous program of repair, replacement, and preventive maintenance.

Major work which requires specialized skill or equipment may be performed by contractors, usually during vacations to avoid interference with classes. The superintendent shall submit to the board a descriptive listing of such projects, together with cost estimates and an indication of priority. The board will determine which projects shall be undertaken and will authorize bidding as

required.

The services of an architect or other specialist on a consultant basis may be utilized when deemed necessary in making an informed judgment, or to prepare plans and specifications as needed.

Attractively landscaped school grounds add value to the community.

Organization

Facility cleaning and maintenance services are usually organized under the responsibilities of the chief school business administrator of the school district. Depending upon the size of the district, there may be an additional level of authority between the chief school business administrator and the custodian(s), such as a supervisor of custodial operations. Figure 1 illustrates a traditional system-wide organization chart for small districts. Figure 2 illustrates a typical system-wide organization structure when there is a supervisor of custodial services such as in large school districts. The solid lines identify routes of direct responsibility and the dotted lines represent routes of consultation within the organization.

Figures 3 and 4 illustrate typical building-level organization charts for small and large districts, respectively.

One thing that hasn't changed much throughout the years is the dual nature of reporting for the custodial position. Custodians have distinct responsibilities within a school over which the building principal must exercise control. At the district level, it is important that custodial responsibilities be coordinated to provide comparable work schedules, duties, responsibilities, salaries and benefits. The lines of communication within the custodial staff will normally be through the head custodian (or someone with a similar title); through the principal or his/her designee for day-to-day direction of activities; and through the supervisor of custodial services for total job responsibilities and expectations on a system-wide basis.

Any attempt to depict in writing those lines of responsibilities would present a picture of rigidity that is not intended. Principals, head custodians, and custodians must exercise every diligence to preserve harmony and efficiency in the daily operation of custodial services, recognizing the need to be reasonable and cooperative. Normally, the custodian will communicate through the head custodian to the chief school business administrator in small districts, or through the head custodian to the supervisor of custodial services in large districts. In cases of emergency, the custodian should communicate according to the emergency preparedness plan in place for the school district.

FIGURE 1
Small School District Organization Chart

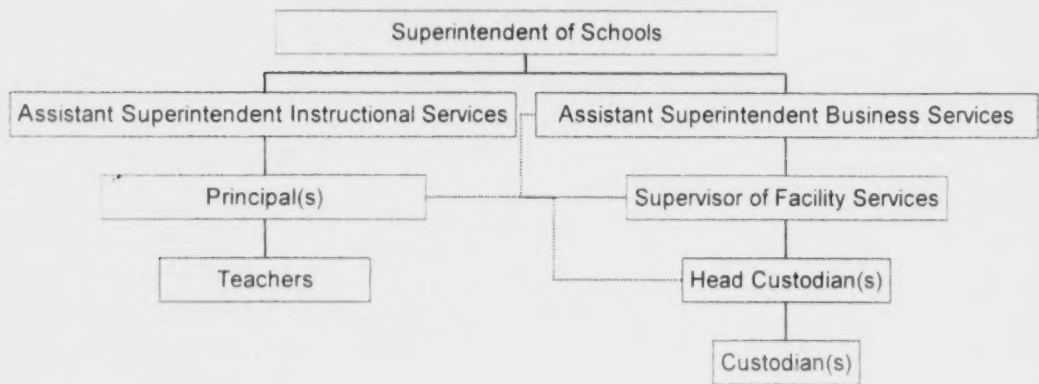
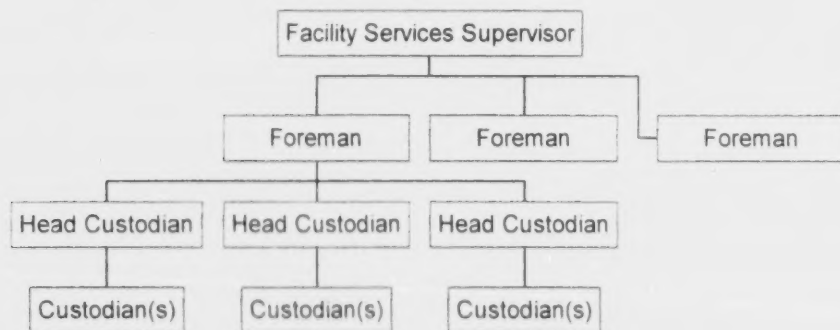


FIGURE 2
Large School District Organization Chart



In large districts, it may be necessary to expand the organizational structure below the Facility Services Supervisor to include additional supervision and accompanying subordinate structure.

FIGURE 3
Small District Building Level Organization Chart

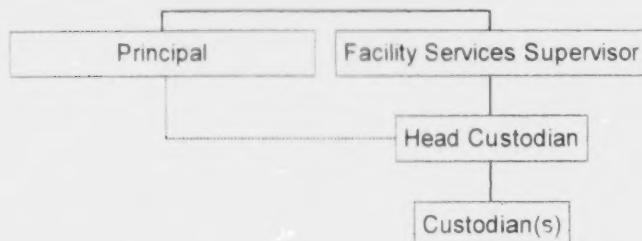
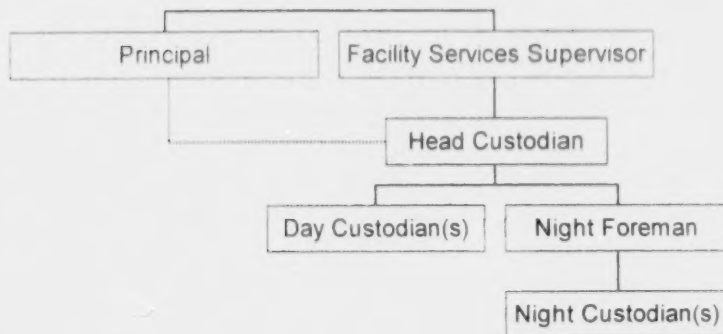


FIGURE 4
Large District Building Level Organization Chart



Scheduling of Daily or Routine Duties and Tasks

The primary goal of all school district employees is to maintain the efficient and harmonious operation of every school as an instructional institution. Reaching that goal is only possible when the role of the principal as the prime coordinator within a school building is recognized. The majority of custodians want to do good work and enhance the instructional program. When treated as professionals, custodians will respond by displaying a professional attitude at the school site.

Custodians are indirectly responsible to the building principal for the quality of their work, and are directly responsible to the head custodian and/or the night supervisor for methods of cleaning. Generally, the head custodian and/or night supervisor will work with the principal to determine daily or routine duties and tasks for the custodian(s). The principal will usually determine and/or schedule special or demand work. If custodians are to work efficiently and effectively, their relationship to the supervisor of facility services must be recognized and clearly understood.

Through the principal, custodians are responsible for:

- Cleanliness of all aspects of the facility and surrounding grounds.
- Proper instructional environment including temperature, ventilation and building safety.
- Scheduling of all custodial activities so as not to interfere with curricular or extra-curricular activities.
- Making the school and grounds available as the principal directs during normal school hours.
- Cooperating with staff to achieve the purposes of the school.

Custodians are employees of the school district, and although assigned to specific schools, they are subject to transfer and/or movement. Custodians are usually hired centrally by the school district's facilities operation and management personnel who coordinate custodian assignments and movements.

Through the supervisor of facility services, custodians are responsible for:

- Carrying-out established system-wide procedures and standards of performance.
- Operating non-instructional equipment and machinery of the facility or grounds.
- Dealing with all matters concerning the authorization of overtime, extra duties, and pay for these activities.
- Relating to all matters in which requests of the principal exceed the personnel resources available for a job.

The maintenance staff supplies necessary services to the principal. These professionals handle all services beyond the scope of the custodians. Some typical services include routine and emergency repairs, scheduled pre-

ventive maintenance, painting, minor and major renovations, and updating facilities for instructional needs. Typical maintenance work not performed by maintenance staff is usually contracted-out.

Staff assignment should be based on fair and equitable workloads as determined by the application of time standards based on appropriate time studies, published criteria, or a combination of these factors. Periodically, articles dealing with these topics appear in *School Business Affairs*, the professional journal of the Association of School Business Officials International.

A usual pattern to establish workloads follows:

1. Conduct an evaluation of the types of, and condition of, the particular spaces under consideration.
2. Determine the square footage, or other unit of measure, for that particular area.
3. Determine the tasks involved in performing assignments.
4. Calculate the time to perform each task based on adopted, applicable time standards.
5. Determine total staff hours to complete all tasks.
6. Calculate the number of people necessary to clean an area or building.

Generally speaking, overall staffing should be based on an expected average productivity of 2,500 square feet per staff-hour of work yielding acceptable standards of cleanliness for a learning environment. The condensed standards presented in Figure 5 are recommended for consideration in staffing and are based on widely accepted industry standards.

Computers and Computerized Maintenance Management Systems

Not only have computers become the thread that winds throughout the instructional program, computers have become a necessary tool to help administrators and managers conduct their work. Facility managers in more and more school districts are using computers to control facility operations and maintenance. Good School Maintenance (Harroun, 8) identified the following management functions that computers typically improve for the maintenance supervisor:

- Scheduling the operation of the heating and cooling system
- Monitoring such critical factors as weather conditions, heating/cooling system functions, security, and fire safety measures
- Reporting on the condition of equipment, energy usage, and manpower usage.

Rhonda Kay Caviedes and Mitchell B. Knecht writing for Facility Management.Com, identified eight key elements to look for in computerized maintenance management software. Careful examination of these elements

FIGURE 5
Recommended Staffing Standards

Space	Service	Unit Measure	Work Rate Time
A. Classrooms (average size)	Routine Clean	850 sq. ft.	24
B. Offices			
Resilient Floor	Routine Clean	1000 sq. ft.	24
Carpet	Routine Clean	1000 sq. ft.	24
C. Floors	Dust Mop	1000 sq. ft.	12
	Damp Mop	1000 sq. ft.	20
	Spray Buff - Daily	1000 sq. ft.	20
	Spray Buff - Weekly	1000 sq. ft.	40
	Spray Buff - Monthly	1000 sq. ft.	120
	Light Furniture Scrub	1000 sq. ft.	240
	Medium Furniture Scrub	1000 sq. ft.	300
	Heavy Furniture Scrub	1000 sq. ft.	400
D. Bathrooms	3 or less Commodes, Urinals & Wash Basins	each	4.5
	More than 3	each	3.0
E. Stairs	Damp Mop	1 flight	12
	Wet Mop	1 flight	35
	Hand Scrub	1 flight	48
	Dust Handrails	1 flight	2
	Dust Treads	1 flight	6
F. Elevators	Vacuum or Dust	each	5
	Remove Fingerprints	each	10
	Complete Clean	each	60
	Buff	each	5
	Scrub	each	15
G. Walls	Wash	1000 sq. ft.	210
	Wash - Heavy Soiled	1000 sq. ft.	290
H. Blinds	Dust	each	15
	Damp Dust	each	30
	Wash	200 sq. ft.	340
	Retape	200 sq. ft.	480
	Cord	200 sq. ft.	410
I. Diffusers	Clean	each	5
J. Windows			
Single Pane	Wash	1000 sq. ft.	240
Multiple Panes	Wash	1000 sq. ft.	320
K. Light Fixtures			
Fluorescent	Dust	4 ft.	5
Egg Crate	Wash	4 ft.	40
Open	Wash	4 ft.	20
Incandescent	Dust	each	5
Incandescent	Wash	each	15

during the evaluation process will help ensure ongoing computerized maintenance management systems (CMMS) success.

1. **Comprehensive Maintenance Management Functionality.** The main factor to consider when selecting a CMMS is the "core" product. It should be made up of three major elements: Work Management, Physical Assets Management and Resource Management.
2. **Extensive Management Reporting Capabilities.** A CMMS is only as good as the information that can be retrieved from it. CMMS's provide extensive management reporting capabilities that include detailed and summary reports, graphical reports, and easy to use report writing tools that do not require programming knowledge.
3. **PM Procedure Library.** Select a CMMS system pre-loaded with mechanical and biomedical preventive maintenance (PM) procedures. This PM procedure library will minimize the start up time necessary to establish and implement your PM program and provide conformance to generally accepted PM inspection schedules.
4. **Support Regulatory Compliance.** CMMS's focus on providing tools that will assist in achieving compliance with an array of regulatory standards including JCAHO, life safety and OSHA. To achieve compliance, premier maintenance management systems support the work flow process necessary to record, assign and account for both the work and the measures taken to correct and/or prevent maintenance related problems. Look for quick one button access to equipment histories and a flexible, detailed, and graphical reporting mechanism for problem and resolution trending (quality assurance) analysis.
5. **Multiple System Interfaces.** Today's CMMS should be capable of working together effectively and transparently with multiple systems. Direct interfaces between the CMMS and other diagnostic and monitoring systems such as building automation, predictive maintenance, and biomedical testing equipment can assist greatly in streamlining the maintenance process, by allowing maintenance personnel to respond to early warning signals before they escalate into critical repair problems. CMMS build upon these types of interfaces to automatically create work orders and update equipment histories based upon alarms and test results received through these interfaces. CMMS's are also capable of interfacing with other technologies such as bar-coding for quick and accurate data entry.
6. **Reliability Centered Maintenance Integration.** Select a CMMS system that fully integrates and takes advantage of Reliability Centered Maintenance (RCM). RCM uses the full capabilities of the modern PC and the Microsoft Windows™ software development environment to provide an interactive method for problem resolution. RCM provides maintenance professionals with: (1) an easy-to-use library of possible

problems for major capital expenditure assets and critical patient care items, (2) problem diagnosis techniques, and (3) a recommendation to repair the cause of the problem and avoids repeatedly wasting money fixing its symptoms.

7. **Harness The Power Of Microsoft Windows™.** Select a PC based CMMS solution that is compatible with Microsoft Windows™. Look for a CMMS design that is founded on an industry standard programming architecture like Microsoft Visual Basic™, Microsoft Access™, and SQL. Today's CMMS objectives are fully realizable using the Microsoft Windows environment. User-friendly, yet powerful features such as: one button access to history, pending work orders, future PMs, electronic file folders for organizing information, and notification of duplicate work orders, now allows the maintenance professional to maximize results while minimizing time and effort.
8. **Proven Expertise And On-Going Support.** Rounding out the eight factors for CMMS success is the expertise and support of the CMMS supplier. The supplier of choice is one that has field proven longevity (10 years minimum) and offers a complete suite of services to complement the software system. Services to expect include: engineering consulting, data collection, data entry, training, implementation and post implementation support.

Job Descriptions

It is important for each school district to have job descriptions for each position in the district. Job descriptions provide an employee with a description of what is expected from them and forms the basis for that employee's performance review. Figure 6 illustrates typical job descriptions for the following custodial positions: Head Custodian, Night Custodian, Custodian I, Custodian II, and Relief Custodian.

FIGURE 6
Job Descriptions by Title

Head Custodian

Function:

Under the general supervision of the Supervisor of Custodial Services, the head custodian is responsible for the uninterrupted and comfortable operation of the school plant, ensuring that standards of cleanliness, sanitation, safety and security are met. Also responsible for carrying out administrative tasks required to maintain and operate the plant to the required standards.

Characteristic Duties and Responsibilities:

1. Maintains the cleanliness of the building and grounds in all respects.
2. Ensures the proper instructional environment, including temperature, ventilation and building safety.
3. Schedules all maintenance activities so as not to interfere with any curricular or extra-curricular activities and, during normal duty hours, makes the school and its facilities available as the principal directs.
4. Cooperates with staff and students to harmoniously achieve the purposes of the school.
5. Operates the heating and ventilating systems and maintains the plumbing and lighting systems, lawns, sports fields and play areas.
6. Advises the Central Office at all times of repair and maintenance action required for plant equipment. Keeps the Supervisor of Custodial Services informed of incidents requiring action, and follows up with the Plant Operations and Maintenance Department when such problems have or have not satisfactorily been completed.
7. Directs and trains assigned staff.
8. Carries out preventive maintenance as directed, and assists the trades in maintaining the plant.
9. Handles minor repairs within his or her resources.
10. Prepares shift schedules and advises the Plant Operations and Maintenance Department office when replacements or extra help are required.
11. Arranges for physical requirements for school rentals and extracurricular activities.
12. Supervises the efficient and proper use of caretaking supplies and maintains a system of stock control of all supplies.
13. Maintains preventive maintenance logs and other records as required.
14. Performs related duties as required for the daily operation of the school.

Qualifications

1. Education-high school graduate, or equivalent.
2. Considerable experience in: plant operation and maintenance; cleaning methods and procedures; repairs; security; heating and ventilation; preferably with several years' experience in related work.
3. Supervisory ability.
4. A program of self-development is most desirous.
5. A willingness to work overtime as required, to ensure that extra-curricular and school rental requirements are satisfied, and when emergency situations arise.
6. Ability to communicate with the principal and school staff so the necessary support requirements for educational programs may be provided.
7. Ability to communicate with persons at all levels in the school community.
8. The requirements for technical knowledge will vary with the classification of the school and the complexity of plant equipment.

Daily Policing (These daily policing activities may be performed by the Head Custodian or another member of the custodial staff.)

The following routine duties are to be performed daily:

- Opens school.
- Raises the flag.
- Checks mechanical rooms to ensure heating ventilation-air conditioning, as applicable, are functioning properly.
- Ensures that cleaning standards meet established requirements.
- Meets with principal to review daily programs requiring custodial support.
- Inspects school grounds to ensure they are free of hazards.
- Dust mops hallways after students have entered classrooms.
- Completes minor repairs and preventive maintenance as required.
- Assists in cleanup after the lunch hour.
- Sweeps hallway after students have returned to their classrooms.
- Performs outside duties as required, i.e., grass cutting and general cleanup.
- Carries out daily cleaning assignments as detailed in the Work Methods and Procedures Manual.
- Reviews rentals for the evening, and passes necessary instructions to the evening shift.
- Handles miscellaneous duties to support the plant operation and functioning of the school.

Night Foreman

Function:

Under the general direction of the Head Custodian, the night foreman is responsible for the night operation of the physical plant.

Characteristic Duties and Responsibilities:

1. Supervises the night cleaning staff.
2. Performs cleaning duties.
3. Carries out daily and scheduled housekeeping duties as required.
4. Executes security and fire hazard checks and advises the appropriate supervisor as required of emergencies arising during his or her shift.
5. Inspects school daily to ensure it has been cleaned to required standards.
6. Prepares for school rentals and acts as the Board's representative to ensure that Board interests and property are safeguarded during these rentals.
7. Replaces the Head Custodian during his or her absence.
8. Handles related duties as required. These may vary in the different schools.

Qualification:

1. Education-high school graduate, or equivalent desirable.
2. Two years experience as a custodian desirable.
3. Supervisory ability.
4. Ability to communicate with persons at all levels in the school community.

Policing-Evening Shift Custodians (These daily policing activities may be performed by the Night Foreman or another member of the custodial staff.)

- Reports to the Head Custodian for instruction.
- Checks all classrooms to ensure they are secure and windows are closed (particularly important in winter to prevent freeze-up).
- Lowers flag at sunset.
- Checks areas periodically where rentals are taking place, to ensure the school property is protected.
- Spot checks the school, particularly when part-time custodians are being used, to ensure cleaning is up to required standards.
- Inspects mechanical equipment before leaving, to ensure heating, ventilation is operating.
- Ensures that all doors are secure before leaving.

Custodian I

Function:

Under supervision, the Custodian I assists in cleaning the physical plant, classrooms and other areas.

Characteristic Duties and Responsibilities:

1. Performs scheduled housekeeping duties as required.
2. Assumes specific housekeeping duties such as:
 - vacuuming and cleaning offices
 - dust-mopping floors
 - dusting
 - cleaning washrooms
 - cleaning offices and committee rooms
 - setting up board rooms and committee rooms as required
 - cleaning spots on tile floors
 - cleaning glass as required
 - damp-mopping washrooms
3. Carries out related duties as required.

Qualifications:

1. Eighth grade education desirable.
2. Some housekeeping experience.

Custodian II

Function:

Under general supervision, the Custodian II is responsible for maintaining the areas allocated to him or her, including classrooms and other areas, to the prescribed standard of cleanliness according to identified procedures. He or she removes hazards and dangerous conditions, which could result in accidents and fire, and prevents needless waste or careless use of supplies, equipment, or other utilities.

Characteristic Duties and Responsibilities:

1. Performs daily and scheduled housekeeping duties as required.
2. Assists organizations using school facilities.
3. Makes minor repairs to equipment as required.
4. Carries out other duties such as:
 - snow removal, grass cutting
 - cleaning glass doors, windows and display stands
 - cleaning sinks in classrooms and labs
 - dusting library books and shelves
 - replacing light bulbs
 - raising and lowering the flag
 - assisting in delivery of supplies from one section of the school to another.
5. Handles related duties as required.

Qualifications:

1. Eighth grade education desirable.
2. Some experience in janitorial work.

Relief Custodian

Function:

The Relief Custodian relieves the Head Custodian or Night Foreman in any size school as required, and performs other duties as assigned when his or her services at the higher level are not required. This is a training position for Head Custodian.

Characteristic Duties and Responsibilities:

1. Operates the heating and ventilation systems and maintains the plumbing system, lighting systems and lawn and sports areas on a relief basis.
2. Directs assigned staff.
3. Carries out preventive maintenance functions and assists in maintaining the plant.
4. Performs minor maintenance such as touch-up painting and repairs to buildings and equipment.
5. Arranges for physical requirements for use of school facilities for extracurricular activities.
6. Controls stock of supplies.
7. Maintains boiler logs and records.
8. Assumes other duties as assigned.
9. Handles related duties as required.

Qualifications:

1. High school graduate or equivalent.
2. Several years' experience in plant operations and maintenance cleaning procedures, repairs, refitting, alterations, security, heating, and ventilation—preferably with several years' experience in related works.
3. Supervisory ability.
4. Ability to communicate with persons at all levels in the school community.

Job Schedules

Job schedules are a useful tool to help employees know what specific duties and tasks are required of them. It is recommended that job schedules be developed and reviewed with each employee. These schedules should include a brief description of scheduled activities, the time allocated to complete the activities, area, and number of square feet. Job schedules will also help to minimize routine duties and tasks from falling between the cracks of multiple custodians in the same building or on different work shifts. Figure 7 presents sample job schedules for four types of maintenance staff personnel: Head Custodian, Custodian I, Custodian II, and two different night custodians. The job schedules were provided by Service Systems Corporation.

FIGURE 7
Job Schedules

**SERVICE SYSTEMS CORPORATION
MAINTENANCE DIVISION
UNIVERSITY CITY SCHOOLS**

JOB SCHEDULE

Hanley Junior High School-Head Custodian

Hours: 7:00 am-4:00 pm

This job schedule is intended to include your daily work as completely as possible. Times are relative and can be adjusted as required in accordance with the maintenance duties of the Head Custodian. This work schedule includes all of the duties described below as well as any emergency and necessary work that may arise.

Although the Head Custodian has critical responsibilities in actual performance of specific tasks, the Head Custodian is, first and foremost, the on-site manager for the maintenance of the building. He or she is responsible for all maintenance employees and their performance of the duties within that building. The responsibility of management is the most important facet of the Head Custodian position.

TIME	AREA	SQ. FT.	DESCRIPTION
Morning Hours			
7:00- 7:20	Grounds, Exterior of Building		Inspect for trash, debris.
	Access Doors		Unlock for day as necessary.
	Interior of Building		Inspect for glaring discrepancies.
7:20- 7:35	Boiler Room & Equipment		Initiate appropriate procedures for operation of equipment based on weather conditions.
7:35- 8:05	Auditorium	6000	Clean weekly as per Task B. Clean more frequently as required
8:05- 8:15	Auditorium Balcony	3000	Clean weekly as per Task B. Clean more frequently as required

8:15- 8:20	Storage Area- Janitor Office	1500	Check daily and clean as required as per Task F.
8:20- 8:30	Head Custodian duties		Check with principal for problems
8:30- 9:00	Head Custodian duties		Perform mechanical orders as necessary
9:00- 9:15	Break Period		
9:15-12:00	Head Custodian duties		Perform Head Custodian duties as necessary. Inspect building for quality standards and supervise day employees.

Afternoon Hours

12:00- 1:00	Lunch Period		
1:00- 1:30	Cafeteria	3408	Assist and supervise cleaning of cafeteria as per Task E.
1:30- 2:30	Head Custodian duties		Check with principal for problems. Perform mechanical orders as necessary. Includes planning and organizing projects for 2nd shift and monitoring progress.
2:30- 2:45	Break Period		
2:45- 3:00	Head Custodian duties		Complete preparation for night shift.
3:00- 3:15	Head Custodian duties		Communicate plans and problems to night supervisor. Discuss any problems that might have occurred at night.
3:15- 3:30	Head Custodian duties		Check building for problems, quality standards, discrepancies.
3:30- 4:00	Boiler Room Equipment		Initiate appropriate procedures to close down the equipment for the night as required by weather conditions.

**SERVICE SYSTEMS CORPORATION
MAINTENANCE DIVISION
UNIVERSITY CITY SCHOOLS**

JOB SCHEDULE

Hanley Junior High School-Custodian II

Hours: 7:00 am-4:00 pm

This job schedule is intended to include your daily work as completely as possible. Times are relative and can be adjusted with the approval of the Head Custodian. This work schedule includes all of the duties described below as well as any emergency work assigned by the Head Custodian.

TIME	AREA	SQ. FT.	DESCRIPTION
Morning Hours			
7:00- 8:00	Restrooms		Check restrooms for supplies. Resolve any problems in restrooms.
8:00- 8:30	Entrances		Wash windows. Spot walls.
8:30- 9:00	Administration		Respond to problems cited by principal.
9:00- 9:15	Break Period		
9:15- 9:45	Cafeteria		Put cafeteria chairs down.
9:45-10:00	Restrooms		Check for problems.
10:00-10:45	Halls (First Floor)	7875	Dust mop completely.
10:45-11:15	Halls (First Floor)		Spot walls where required.
11:15-12:15	Lunch Period		
Afternoon Hours			
12:15- 1:00	Cafeteria		Remove trash.
1:00- 2:15	Cafeteria- Faculty Dining		Clean off table. Clean cafeteria as per Task E.
2:15- 2:30	Break Period		
2:30- 3:00	Cafeteria		Clean cafeteria as per Task E.
3:00- 3:45	Girls' Restrooms		Clean completely as per Task C.
3:45- 4:00	Other duties as required		Clean equipment and put away.

SERVICE SYSTEMS CORPORATION
MAINTENANCE DIVISION
UNIVERSITY CITY SCHOOLS

JOB SCHEDULE

Hanley Junior High School-Custodian I

Hours 7:30 am-4:30 pm

This job schedule is intended to include your daily work as completely as possible. Times are relative and can be adjusted with the approval of the Head Custodian. This work schedule includes all of the duties described below as well as any emergency work assigned by the Head Custodian.

TIME	AREA	SQ. FT.	DESCRIPTION
Morning Hours			
7:30-8:00	Cafeteria		Replace trash barrels.
8:00-8:30	Rooms 33, 31, 25, 21, 23, Stairs, 9, 7.	8378	Check night section for problems, discrepancies.
8:30-10:00	Exterior Grounds		Police for trash and debris.
10:00-10:15	Break Period		
10:15-10:45	Stairways		Clean completely as per Task D.
10:45-11:30	Halls (Second Floor)	6010	Dust mop completely.
11:30-12:30	Lunch Period		
Afternoon Hours			
12:30-1:00	Exterior Grounds		Police for trash and debris.
1:00-2:15	Cafeteria	3468	Sweep cafeteria. Spot mop.
2:15-2:30	Break Period		
2:30-4:10	Rooms 33, 31, 25, 21, 23, 9.	6178	Clean completely as per Task A.
4:10-4:25	Room 7	2200	Clean completely as per Task F.
4:25-4:30	Other duties as required		Clean equipment and put away.

**SERVICE SYSTEMS CORPORATION
MAINTENANCE DIVISION
UNIVERSITY CITY SCHOOLS**

JOB SCHEDULE

Hanley Junior High School-Night Custodian #1

Hours: 3:00 pm-11:00 pm

This job schedule is intended to include your daily work as completely as possible. Times are relative and can be adjusted with the approval of the Night Foreman. This work schedule includes all of the duties described below as well as any emergency work assigned by the Night Foreman.

TIME	AREA	SQ. Ft.	DESCRIPTION
Afternoon Hours			
3:00-3:35	Girls' P.E. 8A	1736	Clean completely as per Task E
3:35-4:05	Boys' Gym 12	4779	Clean completely as per Task E
4:05-4:40	Boys' P.E. 12A	1736	Clean completely as per Task E
4:40-5:00	Boys' Locker Room 10	2510	Clean completely as per Task E
5:00-5:15	Break Period		
5:15-5:30	Girls' Locker Room 8	2510	Clean completely as per Task C
5:30-5:40	Girls' P. E. Office 4	400	Clean completely as per Task B
5:40-5:50	Coaches' Office 10 A	336	Clean completely as per Task B
5:50-6:00	Boys' RR	46 fix	Clean completely as per Task C
Evening Hours			
6:00-6:30	Lunch Break		
6:30-8:45	Boys' RR		Clean completely as per Task C
8:45-9:00	Hall (Ground Floor)	3159	Clean completely as per Task D
9:00-9:15	Break Period		
9:15-9:40	Hall (Ground Floor)		Clean completely as per Task D
9:40-10:55	Stairways	18	Clean completely as per Task D
		Flights	
10:55-11:00	Other duties as required		Clean equipment and put away

**SERVICE SYSTEMS CORPORATION
MAINTENANCE DIVISION
UNIVERSITY CITY SCHOOLS**

JOB SCHEDULE

Hanley Junior High School-Night Custodian #2 Hours: 3:00 pm-11:00 pm

This job schedule is intended to include your daily work as completely as possible. Times are relative and can be adjusted with the approval of the Night Foreman. This work schedule includes all of the duties described below as well as any emergency work assigned by the Night Foreman.

TIME	AREA	SQ. FT.	DESCRIPTION
Afternoon Hours			
3:00- 3:35	Rooms 200, 218, 217	1827	Clean completely as per Task A.
3:35- 4:10	Rooms 215, 225, 227	1789	Clean completely as per Task A.
4:10- 4:40	Rooms 233, 231	1624	Clean completely as per Task A.
4:40- 5:00	Room 225	1218	Clean completely as per Task A.
5:00- 5:15	Break Period		
5:15- 5:40	Room 219	1218	Clean completely as per Task A.
5:40- 6:00	Rooms 116, 114	720	Clean completely as per Task A.
Evening Hours			
6:00- 6:30	Lunch Break		
6:30- 7:00	Halls (Second Floor)	2655	Clean completely as per Task D.
7:00- 7:40	Rooms 106, 102, 101	1827	Clean completely as per Task A.
7:40- 8:05	Rooms 105, 103	1218	Clean completely as per Task A.
8:05- 8:20	Room 100	609	Clean completely as per Task A.
8:20- 9:00	Halls (First Floor)	3779	Clean completely as per Task D.
9:00- 9:15	Break Period		
9:15-10:55	Other duties as required		Spray buffing, project work, refinishing, wall washing, relief.
10:55-11:00	Other duties as required		Clean equipment and put away.

Training and Evaluation

It is not enough to hire custodians and give them a job description and/or task list. A regular program for custodian staff training should be a matter of district policy. Professional growth should play a vital role in keeping custodians. In addition to initial training for custodians, special training will be needed as new products, equipment, and techniques become available. It will not benefit the custodian or the facility if a custodian is simply given a new product to use without providing training for the use of that product. Sending custodians to new product and equipment workshops should be encouraged.

The work of custodians is subject to periodic evaluation by the principal of the school and the supervisor of facility maintenance in regard to the assigned area of responsibilities. Scheduled and impromptu visits to the school are a necessary function of the supervisory personnel of facility operations to assure the administration that the services required to maintain the facility are at an appropriate level to provide a clean, safe, attractive, functioning facility.

The principal or designee should complete the evaluation in consultation with the supervisor of facility maintenance. The evaluation should be reviewed and discussed with the custodian. Salary increases and promotions should be dependent upon satisfactory evaluations.

Figure 8 illustrates a performance review form used by Northbrook School District 28, Northbrook, Illinois to evaluate employee performance.

References:

Caviedes, R. K. and Knecht, M. B. (1998). *CMMS: the 8 key elements to look for in maintenance software*, <http://www.facilitymanagement.com>

Harroun, J. T. (1996). *Good school maintenance*, 3rd edition. Springfield, IL: Illinois Association of School Boards.

FIGURE 8

Sample Performance Review Form**NORTHBROOK SCHOOL DISTRICT 28
PERFORMANCE REVIEW FOR CLASSIFIED EMPLOYEES**

Employee Name _____	Building _____	Date _____
Position/Title: _____	Review Period _____	

Performance Review Instructions

The degree to which this appraisal will benefit the school district, the supervisor, and the employee, will be determined in large part by the care, accuracy, and honesty invested in its preparation. The performance review process begins with a review of the Position Description to correctly reflect the employee's current responsibilities and accountabilities. The second part of the process is the preparation and documentation of the past year's performance by both the *supervisor and the employee*. The last step of the performance review process includes the Performance Review Interview including discussion and completion of this Performance Review form. Completion of this form should reflect sound and objective evaluation of *the employee's* performance in each of the Job Performance Factors listed. Consider each factor independently. Make comments on each factor as needed to clarify every rating.

Definitions of Performance Categories

- | | |
|------------------------------|---|
| Distinguished (D) | Results indicate performance that is clearly outstanding. Results obtained are in excess of the requirements of the position and the individual's outstanding performance is clearly obvious to all. |
| Commendable (D) | Results indicate performance clearly exceeds the fully proficient level; noticeably exceeds teed results of the position On most performance standards. |
| Fully Proficient (FP) | Results indicate performance that is completely satisfactory and sufficient in every rest. Meets all <i>major end results in the</i> completely acceptable manner of a seared and well qualified employee |
| Fair (F) | Results indicate performance riot vet completely meet requirements ref all objectives, Results fall somewhat below expected levels of accomplishment and the need for further development is clearly recognizable, but progress is clearly evident. Employees in this category meet the minimum requirements and are still growing into their jobs. |
| Marginal (M) | Results are well below the expected level. Results indicate obvious failure that is intolerable for more than a short period of time. Involvement must be made to justify continued employment are the position. |

LIST OF PERFORMANCE FACTORS AND EVALUATIONS

Physical Asset Management

Physical asset management includes developing historical data relating to the facilities, updating and changing that data, managing facility assets, providing asset accounting, and preparing for emergencies.

Computerized Facility Plans and Specifications

There should be an organized library of complete plans and specifications for each facility in the school district. These detailed plans should include "as-built" plans rather than the initial schematics or plans used to bid out the facility construction or renovation. If the school district is using computers and/or CAD systems for storage and retrieval of facility plans, all facility plans should be scanned into or entered into the computer system. By having all of the school district's facility plans in digital format, the district can readily transmit by FAX or e-mail specific portions of the facility plans to architects, maintenance, or custodial personnel. If the school district does not have sufficient staff to enter the "old" data into the computer, it is recommended that a commercial vendor be employed to perform that service.

Fixed Asset Accounting System

Complementing a school district's automated facility information should be a fixed asset reporting system. Computer software is available that would enable a school district to input their historic data, monitor changes in their fixed assets, and determine a value for the school district's land, facilities and equipment. If the school district does not have the resources on staff to develop this fixed asset accounting system, it is recommended that a commercial vendor be employed to develop and monitor the system.

A final component of this digitized facility file are the warranties, guarantees, and service contracts for the school district's facilities and equipment. This information can be readily scanned into digital format as the information is received, reviewed, approved, and processed.

Facility and Site Evaluation

Custodian and Maintenance supervisors may find it helpful to conduct periodic site evaluations of the school district's custodial and maintenance program. A quick "checklist" evaluation form used by Northbrook School District 28, Northbrook, Illinois follows in Figure 9.

These periodic site evaluations will help determine what renovation or new construction work needs to be done. Combined with other administrative, staff, and board member input, a long-range plan for the school district's facilities should be developed. This plan will include the planned and unplanned facility work history of the school district.

Planning for Emergencies: A Step-By-Step Approach

While school can't control when emergency situations will occur, the school districts can establish a plan for dealing with emergencies. Lawrence G. Perry, AIA, Codes Representative for BOMA International, developed the following plan to help school districts prepare emergency plans for disasters. Preparing for an Emergency: A Step-By-Step Approach

Over the past several years, a steady flow of large-scale disasters has occurred across the nation. Earthquakes, spectacular fires, large-scale floods, wildfires, workplace shootings, and vandalism have all grabbed headlines. This series of events has led to an increased focus on the issue of emergency preparedness, as individual's wonder "Could it happen here?" This heightened awareness could have a significant benefit if facilities take the opportunity to develop and implement comprehensive emergency plans.

If an emergency plan is to be effective, it must be tailored to the specific facility for which it is intended. The issues involved in emergency planning are far too widespread for there to be a single, universal "one-size-fits-all" emergency plan. Geographic location, building type, building use, adjacent facilities, and building occupants all effect the potential threats and the potential responses to emergencies. Therefore, an emergency plan must be developed based on the specifics of the facility in question. This article outlines a step-by-step approach that can help educational and health care facilities create, implement, and maintain an effective, comprehensive emergency plan.

The Emergency Planning Process

The proper way to approach any large task is to break the overall project down into a series of manageable steps. The first two steps of the process involve identifying and organizing all relevant issues. Once these issues are identified, the specific strategies of the plan can be developed. These strategies should then be reviewed and tested before the plan is put into place. Implementing

FIGURE 9
Evaluation of the Custodial and Maintenance Program for School Buildings

Location: _____ Date of Inspection: _____

Maintenance Inspector's Name: _____

Rating System: Column No. 1 — Superior = 4 points
 Column No. 2 — Above Average = 3 points
 Column No. 3 — Average = 2 points
 Column No. 4 — Poor = 1 point

Items	No. 1	No. 2	No. 3	No. 4	Remarks
CUSTODIAN'S					
Dress					
Attitude					
Performance					
Capability					
GROUNDS:					
Condition of lawn					
Condition of shubbery					
Condition of drives					
Condition of walks					
Cleanliness of grounds					
Drainage					
Condition of fences					
Playground equipment					
Condition of flag					
OUTSIDE OF BUILDING:					
Gravel Stop					
Roof					
Gutters and downspout					
Glazing of windows					
Foundations					
Structure					

FIGURE 9 (Continued)

Items	No. 1	No. 2	No. 3	No. 4	Remarks
CORRIDORS:					
Outside doors					
Floor mats					
Condition of floors					
Condition of walls					
Condition of skylights					
Cleanliness of light fixtures					
Condition of ceiling					
Drinking fountains					
Lockers and shelves					
Panic hardware					
ADMINISTRATIVE UNIT:					
Condition of floors					
Condition of walls					
Light fixtures					
Blinds and shades					
Furniture and cabinets					
Lounge condition					
Clinic condition					
CATERIA AND KITCHEN:					
Condition of floors					
Condition of walls					
Light fixtures					
Condition of furniture					
Condition of tables					
Cleanliness of equipment					
Screens and doors					
Cleanliness of mop sink					
Condition of storage room					
Condition of restrooms					
Condition of grease trap					

FIGURE 9 (Continued)

Items	No. 1	No. 2	No. 3	No. 4	Remarks
CLASSROOMS:					
Condition of floors					
Condition of walls					
Condition of windows					
Condition of doors					
Condition of ceiling					
Condition of light bulbs					
Condition of light fixtures					
Condition of blinds and shades					
Regulation of heat					
Chalkboard condition					
Chalk rails condition					
Condition of erasers					
Furniture condition					
Convactor/radiators					
Other types of heat					
Teachers' cabinet					
Shelving condition					
Toilets					
Sink condition					
Work counters					
SPECIAL INSTRUCTIONAL AREAS:					
Library					
Condition of workroom					
Condition of lighting					
Condition of furniture					
Shelving					
Labs					
Supply room condition					
Condition of sinks					

FIGURE 9 (Continued)

Items	No. 1	No. 2	No. 3	No. 4	Remarks
Labs (continued)					
Cleanliness of tables					
General appearance					
Shops					
Condition of floors					
Condition of walls					
Cleanliness of light fixtures					
Condition of sinks					
Work table condition					
Machinery condition					
General appearance					
TOILET ROOMS:					
Condition of doors					
Condition of floors					
Condition of stalls					
Supply dispenser condition					
Amount of supplies					
Cleanliness of light fixtures					
Condition of bowls					
Condition of sinks					
Condition of urinals					
General appearance					
GYMNASIUM:					
Condition of floor					
Lighting condition					
Seating condition					
Dressing room condition					
Toilet room condition					
Shower stall condition					
Condition of walls					
General appearance					

FIGURE 9 (Continued)

Item:	No. 1	No. 2	No. 3	No. 4	Remarks
HEATING PLANT AND ELECTRICAL SYSTEM:					
Boiler room					
Grate condition					
Condition of flues					
Condition of boiler					
Condition of toilets					
Fuse panel condition					
Circuit breaker condition					
Circuits					
Switches and covers					
General condition					
CARE OF SUPPLIES AND EQUIPMENT:					
Storage room condition					
Condition of sinks					
Care of tools					
Tool storage					
Supply storage					
Use of supplies					
Kind of supplies					
SAFETY:					
No. of fire extinguishers					
Condition of fire extinguishers					
Exits open					
Corridor obstruction					
Exit lights					
Fire hazards					
Fire alarm system					
Fire escape					

FIGURE 9 (Continued)

Item:	No. 1	No. 2	No. 3	No. 4	Remarks
GENERAL:					
General appearance of building					
Painting schedule					

SCORING PROCEDURE: Add up the individual columns. Sum the four columns. Divide this number by the total number of applicable items above times 4. The resulting value is the percent grade.

FORM 5.15**Key use of form:**

Used to record the results of the inspection

Who prepares:

Maintenance inspector

Who Uses:

Designated maintenance management personnel for analysis of work performed and to plan and schedule any required follow-up work.

How to Complete:

Rate the work performed by marking the appropriate spaces provided.

Alternative Forms:

A company can make appropriate revision to the form to meet specific needs.

the plan involves creating the needed documentation and training those involved. Once the plan is in place, a process for maintaining it is necessary.

The following six steps can be used to create an emergency plan for a facility that has no current plan. It is equally useful for reviewing and updating an existing emergency plan.

Step 1: Identify The Issues

The first step of the emergency planning process involves a straightforward identification of all the relevant issues or factors involved. The first group of issues to identify are the types of potential threats to the facility. The types of threats will depend on the geographical location of the building, adjacent facilities, the building configuration, construction type and systems, the use of the building, and the occupants of the building.

In addition to identifying potential threats, there are four other groups of issues or components that should be identified. They include:

- Regulatory Components—authorities who may adopt or enforce rules, respond to emergencies, or assist in recovery from emergencies
- Human Components—the building population
- Building Components—physical elements or systems
- Business Components—operations, physical contents, data, and insurance

A thorough identification of each of these issues provides a solid base for the development of a complete emergency plan.

Step 2: Evaluate The Issues

Once all the issues have been identified, the information should be analyzed to form the framework around which the emergency plan can be developed. This step should involve estimating the probability and potential impact of each identified threat, based on each of the identified components that are relevant to that specific threat. Potential problems or conflicts should also be identified.

With the information accumulated at this phase, a preliminary structure of the internal emergency team should also be outlined. This structure can be fine-tuned as the process continues. This preliminary structure is needed so that decisions regarding duties and responsibilities can be made in the next step.

Step 3: Develop The Plan

Specific strategies for addressing each known threat to the facility are developed during this phase of emergency planning. For each identified emergency, the following nine issues should be addressed:

- **Prevention.** This issue involves actions that can be taken in order to reduce the chances of an emergency occurring, or to reduce the effect of an emergency should it occur. The focus of this issue should be actions that become "standard operating procedure" for the facility.
- **Detection.** In every actual emergency, and in some potential emergencies, there is a specific time when some person or some system detects an incident that is occurring. Detection may occur either internally (e.g., a building system detects a fire) or externally (e.g., the utility company issues a power shortage warning). This issue involves the identification of each potential source of detection for a specific emergency situation.

In addition to identifying the potential source of detection, the potential timing of the detection should be identified. Some emergencies may be detected before they affect a facility; other emergencies may not be detected until they are already affecting the facility.

- **Notification.** Once detection has occurred, the next issue is to ensure that proper notification occurs. Notification involves informing those persons (or systems) that need to know about the situation. Persons who are at risk need to be notified, as do persons responsible for responding to the emergency. Each individual and entity that would need to be notified during an emergency must be identified, as well as the methods or systems that will be used for notification. Internally originating emergencies may require notification of both internal and external entities. When an emergency originates elsewhere, the issue is to identify how the facility will be notified of the threat.

The responsibilities and the complexities of notification must be tailored to the detection source. A visitor to the building cannot be expected to perform any but the simplest of notification; a building engineer, or an agency such as the National Weather Service, is likely to be capable of more complicated notification responsibilities.

- **Communication.** It is essential that effective lines of communication be opened and maintained throughout the incident. This issue involves identifying both the systems that will be utilized for communication purposes and the proper channels or procedures to be implemented for ensuring effective communication. Persons involved in an emergency need to know how they will receive information and how they should relay information that they may have. When developing communication strategies, be sure that the system will be reliable and

consider having at least one backup system available in the event the primary system breaks down.

- **Evacuation.** Certain emergency situations may require the evacuation of some or all of the occupants of the facility. First, a determination of whether evacuation might be necessary for a specific emergency should be made. If evacuation might be required, determine whether evacuation would need to be complete or partial and if it would be of an emergency (as quickly as possible) or a gradual nature. Other issues to be addressed include: determining who will order and supervise evacuation, how will occupants with special needs be accommodated, who will verify that evacuation is complete, and where will persons evacuate to.
- **Control/Mitigation.** This issue involves identifying the systems or procedures that may be used to reduce the impact that an emergency may have on the facility. This may include actions before "impact," during the emergency, or after the emergency. Unlike preventative measures, which become general procedure, control and mitigation measures are only feasible when an increased threat, or an actual incident, occurs.

Control and mitigation may involve either building systems (which may be passive or active) or human intervention. Human intervention may be by regulatory components (such as firefighters) or building occupants (a trained individual using a fire extinguisher).

- **Documentation.** Thorough documentation is essential before, during, and after an emergency. Before an emergency, good documentation ensures that those persons involved know the plan, know what is expected of them, and know how to report and identify minor problems before they contribute to an emergency. During an emergency, documentation can be a helpful tool for those implementing the plan increasing the likelihood that proper procedures are followed. Good incident documentation also provides an effective means of tracking the progress and status of an incident, and is also useful if a reconstruction of the incident is necessary. After an emergency, documentation can be helpful in improving the plan for future incidents and in streamlining any issues related to liability or insurance.
- **Recovery.** Recovery involves those actions necessary to return to pre-emergency status. Recovery may be either minor (a simple cleanup) or major (reconstruction). The potential steps that may be needed for recovery should be identified in the planning process. Some efforts before an incident may greatly increase the speed at which recovery efforts may begin and be completed.

Regulatory agencies may offer recovery assistance from certain emergencies—these sources should be identified, with the proper

contacts noted. Where the building is affected by the incident, repairs or replacement of elements may be needed. Some recovery operations may be able to utilize existing contractors or suppliers; others may require special services. Possible emergency recovery services should be discussed with existing contractors and specialized service providers should be identified and contacted.

- **Public Relations.** The development of the emergency plan should include a process for handling media contacts and requests for information. An effective public relations plan is an important part of the overall facility and organizational response to an incident. A media contact person should be identified and any requests for information about emergency preparedness, an unfolding incident, or a past incident should be initially fielded by that individual. Effective media and public relations policies can limit negative media attention and can also prevent rumors, opinions, and unsubstantiated theories from being broadcast as facts.

Step 4: Analyze The Plan

Now that the plan is developed, this step serves as a "debugging" phase before the plan is put into place. This step involves comprehensive review of the plan, including outside review if possible, and testing of the strategies and systems being used. This step serves as a final review before the plan is implemented.

Step 5: Implement The Plan

In order to implement the plan, those persons involved must be trained and the printed materials needed for the plan must be prepared. Training may involve both simple presentations to all building occupants as well as intensive training with possible certification or licensing of emergency team or building personnel.

The plan documents should also involve several levels of detail. A single document will not be able to serve all of the various persons involved in the plan. A visitor or an employee in the building requires a much simpler explanation of the plan than does a building engineer or facility manager responsible for coordinating emergency response efforts. In addition, regulatory agencies may require a specific set of information in a specific format to be located in a specific place.

Each of the different audiences to be reached should be identified and both the training and the documents developed should be tailored to the needs, the responsibilities, and the expertise of the group.

Step 8: Maintain The Plan

Once the plan is implemented, a process should be put in place to ensure that each piece of the plan remains effective and that the plan responds to any changes that may affect the strategies developed.

Any of the initially identified issues can change over time: the threat of a specific type of incident may change, regulatory components may change rules or response capabilities, building components may be upgraded, added, damaged, or removed, business operations may change, and most commonly, human components will change. Any change to any component needs to be assessed for its impact on the emergency plan.

By constantly monitoring the subtle changes to the overall plan that may occur over time, the plan itself can gradually be revised based on those changes, keeping it up-to-date and as effective as the day it was implemented. If the plan is put into place and then forgotten, when an incident does occur, critical personnel may be untrained, building systems may not function, and time will be wasted trying to identify the proper responses and procedures to implement.

Resolution

Once an incident begins, the opportunity for rational, well thought out planning is lost. Therefore, educational and health care facilities without a comprehensive emergency plan should make it a high priority to develop and implement such a plan. Facilities with existing plans should set up a review process to verify that their plans are complete and up-to-date. A comprehensive emergency plan can prevent emergencies, keep small incidents from escalating into large ones, limit loss of property and/or life, and reduce liability.

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Resource Management ³

Resource management includes identifying cleaning procedures and methods, develops and maintains a preventive maintenance program, supports a full inventory and purchasing system, tracks in-house and outside service costs, and interfaces with the school district's financial management system.

Cleaning Procedures

Cleaning procedures are illustrated by function. Information is provided on daily, weekly, and every other week cleaning procedures in these areas:

- Entrances, lobbies, halls, and receiving areas
- Classrooms and laboratories
- Offices, lounges, medical areas, and conference rooms
- Stairs
- Elevators
- Locker rooms and dressing areas
- Showers
- Auditoriums
- Kitchens
- Cafeterias and lunchrooms
- Shops and other service areas
- Gyms and playrooms
- Storage areas
- Washrooms

FIGURE 10
Cleaning Procedures

Entrances, Lobbies, Halls and Receiving Areas

Daily:

- Empty waste from waste receptacles into waste bag on the cart.
- Damp-wipe soiled waste receptacles. Replace plastic liners when used in waste receptacles.
- Dust all windowsills, ledges, and furniture tops using a treated cloth, dusting mitts, or dust mop with short handle.
- Clean smudges and soil from glass in partitions and doors, using glass cleaner in a spray bottle and a clean lint free cloth or paper towel.
- Vacuum any carpets or mats and check carpets for spot cleaning.
- Dust mop floors with a wide, treated dust mop, keeping the dust mop head on the floor at all times.
- Pick up soil from floor with dustpan. Vacuum mop head periodically to remove dust, when a vacuum cleaner is available, or shake out into empty plastic bag, with mop head in the bag. Sweep wood and rough concrete floors.
- With a lightly dampened mop, spot-mop floors as necessary to remove heavy soil. (Completely damp mop ceramic, concrete, terrazzo and resilient tile floors weekly).
- Clean water fountains with germicidal detergent or powdered cleanser. Wipe off with dry cloth.
- Spot-clean finger marks and smudges on walls, door facings and doors. Use detergent solution in spray bottle and a sponge. Rinse with sponge and clear water and plastic bottle as needed.

Weekly:

- Completely damp mop ceramic, concrete, terrazzo and resilient tile floors.
- Using a treated cloth, dusting mitts or small dust mop with short handle, dust vertical furniture surfaces, wall vents and vertical wall trim.
- Polish brass doorknobs, rails, push-plates on doors, kick-plates on doors and other pieces of brass trim.

Every Two Weeks:

- Using a floor machine equipped with a buffing brush or pad, spray buff resilient tile and terrazzo floors. After buffing, dust mop the floor as necessary.

Classrooms and Laboratories

(This Procedure May Also Apply to Libraries, Auditoriums, and Some Shop Areas)

Daily:

- Empty all waste receptacles. Do not reach into the receptacles, but carefully dump the contents of the receptacle into the waste collection bag. Damp wipe soiled receptacles. Replace plastic liners when used in waste receptacles.
- Carefully clean and damp wipe the marker/chalk tray beneath markerboards and/or chalkboards.
- Spot-clean glass in doors and partitions and on the inside of windows to remove smudges. Use soft lint free clean cloth or paper towel and glass cleaner.
- Dust window ledges, sills, displays and decorations. Use lightly treated dusting cloths or dusting mitts. Dust horizontal furniture surfaces, except student desks. (Inspect student desk tops and spot-clean them to remove heavy soil, heavy marking or graffiti).
- Spot-clean walls, doors and ledges as needed. Use clean cloth or sponge and detergent solution in plastic spray bottle.
- Vacuum clean the traffic patterns on any carpets and check for spot-cleaning.
- Dust mop smooth floors with a treated dust mop. Sweep rough wood or concrete floors.
- Using a slightly dampened cotton mop, spot-mop floors as necessary, except in carpeted areas.
- Clean sinks and replenish paper towels.
- Rearrange furniture as needed.

Weekly:

- Clean markerboard and/or chalkboard erasers with eraser cleaner or vacuum cleaner.
- Using lightly treated dusting cloths, dusting mitts or small dust mop with a short handle, dust vertical furniture surfaces, wall vents and vertical wall trim. (Do not spend a great deal of time dusting the vertical surfaces of student desks).
- In areas that have ceramic, concrete, terrazzo or resilient tile floors, damp mop the complete area.
- Completely vacuum carpeted classrooms.

Every Two Weeks:

- In areas which have terrazzo or resilient tile floors which are coated with floor finish or floor wax, buff the floors using a floor machine equipped with buffing pads.

Note: Empty pencil sharpeners only in places where leaving them full seems to be a housekeeping problem. Otherwise, leave this task to the users of the room to perform, occasionally inspecting the situation. When emptying a pencil sharpener, hold the sharpener deep in a waste collection bag to prevent raising dust.

Offices, Lounges, Medical Areas and Conference Rooms

Daily:

- Empty all waste receptacles and damp wipe them as necessary to remove soil.
- Dust clear areas of furniture tops, shelves, sills and ledges. Use treated cloth or dusting mitts. (Dust only horizontal surfaces daily).
- Spot-clean glass in doors and partitions. Use soft clean cloth or paper towel with glass cleaner in a spray bottle. Wipe dry as needed.
- Clean any sinks or other restroom fixtures in offices or medical areas in accordance with the rest room cleaning procedure.
- Dust mop smooth floors with a treated dust mop. Sweep wooden or concrete floors that are too rough to dust mop.
- Using a slightly dampened cotton mop with a mild detergent-disinfectant solution, spot mop all floors (except carpeted floors) only to remove very heavy soil.
- Vacuum clean traffic patterns on carpeted floors four days each week. (Vacuum clean the entire carpeted area one day each week).
- Rearrange furniture as needed.

Weekly:

- In areas that have ceramic, concrete, terrazzo or resilient tile floors, damp mop the entire area.
- Completely vacuum clean carpeted areas.
- Using a treated cloth, dusting mitt or small dust mop with shorthandle, dust vertical furniture surfaces, wall vents and vertical wall trim.

Every Two Weeks:

- In areas which have terrazzo or resilient tile floors which are coated with floor finish or floor wax, buff the floors using a floor machine equipped with a buffing pad. Dust mop the floor after buffing as needed.
- If there are sealed concrete floors coated with floor finish or floor wax, these should be buffed monthly.

Stairs

Daily:

- Dust mop using a small treated dust mop with short handle where treads are smoothly and soil is light. If soil is heavy or abrasive, use a broom. Pick up soil and litter at the bottom of the stairs with a dustpan. Dust handrails and any windowsills or ledges.
- Replace accessible burned out lights.
- Spot-clean walls, using detergent solution in spray bottle and a sponge or cloth. Difficult-to-remove marks may be removed by carefully applying lotion cleanser with a damp sponge or cloth and rinsing thoroughly with clean water.
- Using a damp cotton mop, spot-mop treads that are heavily soiled.
- Vacuum clean carpets and spot-clean as necessary.

Weekly:

- Completely damp mop treads. (Use a sponge mop where soil is light).

Monthly:

- Wash handrails with detergent solution and cloth. Use green nylon hand pad where soil will not come off with detergent solution.
- Wash stair risers with lotion cleanser and a heavy cloth or scrubbing brush to remove soil, scuffs and shoe marks.

Elevators

Daily:

Dust mop floor of elevator with treated dust mop.

Mop floor using detergent solution. Rinse floors with mop damp with clear water.

Clean door track with vacuum cleaner and damp clean as needed.

Damp clean elevator walls and all elevator doors (every floor) with sponge or cloth dampened in detergent solution. Dry with clean dry cloth. Spot-clean daily to remove marks and smudges and completely clean weekly.

Locker Rooms and Dressing Areas

Daily:

- Empty and clean all waste receptacles.
- Damp clean benches and furniture. Use cloth dampened in cleaner-disinfectant solution in plastic spray bottle.
- Spot-clean walls, furniture and lockers with a sponge wet with solution. Rinse the sponge in clear water.
- Sweep floor, using a treated dust mop or a push broom (for wet or rough floors).
- Mop floor with cleaner-disinfectant solution in mopping outfit.
- Wring mop slightly before applying.
- Completely vacuum clean any carpeted locker room floors.

Weekly:

- Damp dust lockers. Use cloth dampened in solution.
- Buff resilient tile floors coated with floor finish or floor wax.
- Dust mop floor after buffing as needed.

Every Two Weeks:

- Buff sealed concrete floors coated with floor finish or floor wax. Dust mop floor after buffing as needed.

Showers

Daily:

- Remove all pieces of soap and other foreign matter.
- Flood and scrub floor with cleaner-disinfectant solution. Spread solution over floor with mop and let stand for about three minutes. Scrub with mop or long-handled deck brush. (Use chelating agent instead of cleaner-disinfectant, about twice weekly for scum removal).
- Wipe down walls with solution and sponge, cloth or shorthanded sponge mop. (Use chelating agent, instead of cleaner-disinfectant, about twice weekly for scum removal).

Weekly:

- Polish handles, showerheads and other hardware using mild cleaning solution with dampened sponge. Wipe dry with clean cloth.

Note: Report any stoppages or leaks as soon as possible.

Auditoriums

Periodic:

- Buffing and complete damp mopping should be performed on a project basis, as time allows.
- Waste and litter should be removed daily, and any soil on the floor or walls should be removed daily.
- Floors should be dust mopped twice weekly.
- Seats should be dusted only as needed or before special events, and other horizontal surfaces should be dusted daily as needed.
- Carpeting and fabric upholstery should be vacuum cleaned at least every two weeks.

Kitchens

Periodic:

Trash should be removed daily. Trash cans should be scrubbed daily. Vent hoods, filters, and building surfaces should be cleaned as needed daily and thoroughly cleaned weekly. The floor should be damp mopped with cleaner-disinfectant solution twice weekly, and it should be wet mopped and rinsed three times weekly. The wet mopping should be done with cleaner-disinfectant solution, and the rinsing should be done with clear water. Special attention should be given to the floor beneath tables, cabinets and behind refrigerators. Care should be taken to remove bits of litter and cotton mop strings.

Cafeterias and Lunchrooms

Periodic:

Cafeteria cleaning should encompass the cleaning of all building surfaces, tables and seats. Sweep and damp mop floors daily. Use floor machine to scrub spots where soil is heavy as needed. Buff tile or terrazzo floors coated with floor finish weekly. Spot-clean walls and arrange furniture.

Shops and Other Service Areas

Periodic: Depending on the general appearance of the area and the type of use to which it is put, the frequencies for cleaning may vary from those similar to cleaning storage areas to those of cleaning classrooms. In general, rough concrete floored areas should be swept daily

if not dust mopped. Waste should be removed daily, and waste receptacles should be cleaned. Attention should be given to the spot-cleaning of walls and the removal of heavy soil from any building surface. Concrete, terrazzo and resilient tile floors should, be damp mopped completely each week. In addition, resilient tile and terrazzo floors with floor finish on them should be buffed at least every two weeks.

Gyms and Playrooms

Periodic:

Most of the work in these areas will consist of floor care procedures. In general, floors should be spot-mopped to remove soil daily and completely damp mopped once every two weeks (except wooden floors). For this type of area, floors will not usually have floor finish on them because of possible slipperiness, but if a resilient tile floor should have floor finish on it, it should be buffed every two weeks.

Storage Areas

Daily:

- Empty and clean waste receptacles.
- Clean up any spills or gross soil.

Weekly:

- Dust mop smooth floors. Sweep rough wooden or concrete floors.
- Spot mop floors to remove heavy soil.
- Dust horizontal surfaces and open shelving.
- Vacuum clean traffic patterns on carpets. Check for spot-cleaning.

Note:

The complete damp mopping of floor areas or the buffing of floors should be done only on a project basis, as time allows.

Washrooms

Daily:

- Empty waste paper containers.
- Replenish supplies.
- Dust surfaces and spot wipe where necessary.
- Wash and disinfect toilet seats, hardware, inside and outside of toilet bowls and urinals.
- Wash and disinfect sinks, hardware and dispensers.
- Polish mirrors.
- Rinse sinks and hardware and damp wipe walls around plumbing.
- Wipe sinks and hardware.
- Sweep floor.
- Damp mop and disinfect floor.

Note: De-lime urinals at least once a week.

Daily Indoor Policing

Entrances, Lobbies, Halls, and Other Public Areas

- Sweep outside steps or nearby sidewalk to keep soil away from door. Keep matting and runners clean and dry at entrance. Use vacuum, if necessary.
- Spot-mop these areas to remove tracked-in water or soil.
- Keep waste receptacles emptied as required.
- Pick up any items that have been dropped on floors.
- Clean any spillages or soiled spots on floors with a mop.
- Spot-clean spills on carpets.

Rest Rooms

- Empty filled rest room receptacles as required. Check paper dispensers for refill.
- Spot-clean soiled basins, toilet seats or any other fixtures or partitions.
- Clean and disinfect any spillage or soiled spots on the floors.

Cafeterias and Eating Rooms (*After Meals*)

- Sweep and police spills and major pieces of litter from the floor. Move furniture as necessary to gain access to soiled places. Leave furniture arranged to facilitate routine cleaning.
- Take out waste receptacles or liners when meal is over and clean waste cans when the garbage has been picked-up.

Cleaning Methods

This section provides general instructions, methods, and procedures for cleaning. It is imperative that manufacturer/supplier directions be followed if the directions differ from the general information that follows. The school district should adapt and modify the general information that follows into their custodial cleaning methods. Materials required, equipment required, and general instructions are provided for the following methods:

- Spray-buffing
- Scrubbing floors
- Stripping wax from floors
- Refinishing floors
- Preparing wood floors for general use
- Removing stains from floor
- Carpet vacuuming
- Carpet shampooing
- Removing carpet stains
- Washing walls and ceilings
- Cleaning chalkboards and markerboards

FIGURE 11
Cleaning Methods

Entrances Lobbies, Halls, and Receiving Areas

Materials Required:

Suitable Polymer Floor Finish

Equipment Required:

- 1 medium or heavy duty single disc floor machine
- 1 thick spray-buffing pad (open weave)
- 1 driving block for pad
- 1 pistol-grip spray bottle (or machine attachment)

Instructions:

1. The spray-buffing technique may be utilized for combined light duty cleaning, refinishing, and polishing, for entire areas or for problem spots.
2. Of primary importance is the selection of the type of polymer floor finish. On spray-buffing, it must not powder (leave a dusty film on the floor when dry), become tacky while being wet-buffed or yellow with age on repeated application. (Some products are manufactured specifically for spray-buffing, although these are not necessarily the best materials to use.)
3. Select the proper type of pad for this work. Although a standard nylon buffing pad can be successful, best results are obtained with a special open weave spray-buffing pad; greatest success is usually achieved with thicker pads, from one-half to one and one-quarter inch in thickness.
4. Dust mop floor to remove surface soil. Wet mop, as needed, to remove soil.
5. Prepare spray-buffing solution. This should be mixed for most floor finishes as follows:
 - 1/2 quart polymer floor finish
 - 1/2 quart water
 - 1 ounce detergent
6. Pour solution into the sprayer. Be sure sprayer is operating properly. If a flask-type container is used, the sprayer may be kept in the pocket; otherwise, provide a hook for hanging on the floor machine handle.
7. Select the proper floor for the spray-buffing technique. It is not successful on a floor that is heavily soiled, uneven, congested or that does not have a protective finish on it.
8. Working forward, spray a small quantity of the solution onto the floor in front of the machine; this may be done from a standing position while

the machine is in motion. The spray should lightly wet a small area in front of the machine. Avoid excessive spraying, since too much time will be required for buffing the surface dry. Buff until dry and gloss appears. When the pad becomes "loaded," it should be turned over or replaced with a fresh pad. Dust mop after spray-buffing.

9. Regular use of this technique provides a surface that improves in appearance and durability with each application, while considerably extending the period of time between stripping of the finished surface.
10. When finished, the solution should be emptied from the sprayer into a clean closed-top container, and the sprayer washed out by spraying warm water through the orifice. The pads should be cleaned immediately after each use by brushing out with a piece of spray-buff pad and washing out under cold water. Soak in stripping solution when absolutely necessary.

Scrubbing Floors

Materials Required:

Detergent

Equipment Required:

- 2 mop buckets
- 1 wringer
- 2 mops
- 1 dust mop
- 1 push broom
- clean rags
- 1 floor machine with scrubbing pad
- 1 wet vacuum (optional)

Instructions:

1. Sweep or dust mop floor thoroughly.
2. Mix a solution of detergent in one bucket, two ounces per gallon (60 ml to 5 L) of warm water (unless label specifies other dilution).
3. Apply detergent solution to floor. DO NOT flood floor.
4. Allow detergent solution to work for three to four minutes.
5. Scrub floor with floor machine and scrubbing pad, where necessary.
6. Pick up dirty solution with mop and second bucket with wringer, or with wet vacuum.
7. Rinse with clear water after scrubbing. Change water frequently.
8. Spot-clean baseboards with mop or with rags and detergent solution.
9. Allow floor to dry thoroughly.
10. Clean and put away all equipment.

Notes:

- If cleaning is being done in trafficked areas, put out "WET FLOOR CAUTION" signs to prevent accidents.
- On hard (non-resilient) rest room and locker room floors, use wax stripper for better cleaning.

Stripping

Materials Required:

Stripper (*Very old or heavily built-up finish may require more emulsifying time or repeated application).

Equipment Required:

- 2 mop buckets
- 1 wringer
- 2 wet mops
- 1 push broom or untreated dust mop
- 1 baseboard brush clean rags
- 1 floor machine
- 1 stripping pad
- 1 wet vacuum

Instructions:

1. Sweep floor thoroughly with untreated dust mop or push broom.
2. Mix a stripping solution of about six ounces of stripper (170 ml to 5 L) per gallon of water.
3. Apply stripping solution liberally to floor, but DO NOT flood floor.
4. Allow solution to work for three to four minutes, keeping area wet; then scrub with stripping pad.
5. If baseboards have been previously waxed, clean with rags and stripping solution diluted with an equal portion of water. Use baseboard brush as needed.
6. Pick up dirty solution with wet vacuum or with mop and second bucket with wringer.
7. After removal of stripper, rinse thoroughly with clear water. Change water frequently and repeat rinsing if needed to remove all of emulsified wax.
8. Rinse floor with a mild vinegar and water solution, two ounces (60 ml to 5 L).
9. Allow floor to dry thoroughly.
10. Clean and put away all equipment.
11. See Cleaning Method on Refinishing Floors.

Refinishing Floors

Materials Required:

Floor finish (Very old or heavily built-up finish may require more emulsifying time or repeated application).

Equipment Required:

- 1 fine strand mop
- 1 bucket with wringer

Instructions:

1. Floors should be cleaned or stripped according to the appropriate Cleaning Method before finishing is begun.
2. Allow floor to dry *thoroughly* before applying floor finish.
3. Draw required amount of finish into clean mop bucket.
4. Wet the mop head in the finish. Mop heads should be wrung fairly dry, so that when lifted, finish does not drip steadily. If a white film is formed immediately as the finish is applied, then too much is being put down and the mop or applicator should be wrung or pressed more.
5. Allow to dry for 30 minutes before subjecting to traffic. If a second coat is desired, it may be applied about one-half hour after the first coat has dried.
6. *Apply no more than one coat* within six to twelve inches (15-30 cm.) of walls and permanent fixtures or other areas where one cannot walk.
7. Because floor finish dries with good gloss and smooth finish, buffing is not necessary until a day or two after application.
8. Rearrange furniture.
9. Clean and put away all equipment; wash applicator in hot water and rinse.

Note:

Unused portions of finish should be discarded. Estimate amount needed on basis of one gallon giving one coat coverage per 1200 square feet (5 L per 100 m).

Preparing Wood Floors For Dancing

Equipment Required:

- One 48" treated dust mop
- One 48" untreated dust mop
- Two mop buckets
- One wringer
- Walk-off mats

Instructions:

1. Prepare a mixture of three ounces (85 ml) of dust mop treatment for each two pounds (1 kg) of white cornmeal or fine sawdust the day before it is to be used and keep mixture in sealed jars or cans. Mop treatment mixed with cornmeal or sawdust moistens the mixture so that it is not gritty, and also keeps it from dusting while providing a gliding protection between the shoes and the floor.
2. Sweep the floor with a treated dust mop before the dance to remove gritty dust and dirt that could wear the floor finish under the dancer's feet.
3. Use mats at entrances to prevent tracking in or out of the room.
4. Sprinkle the floor with the mixture immediately preceding the dance. Maintain sufficient mixture to give the desired gliding protection.
5. After the dance sweep the floor twice with an untreated dust mop.
6. Damp mop using a mop that is well wrung out to keep the water to a minimum.
7. Allow floor to dry thoroughly.
8. Sweep the floor with a treated dust mop.

Removing Stains From Floors

Use all chemical agents with extra care to prevent fire, skin irritation or injury and damage to surfaces. Use protective gloves and eye protection. Try to de-stain a small inconspicuous "test spot" before beginning a larger operation. Because of the many variables of surfaces, dilutions, application and supervision, care must be exercised in the use of this chart.

Blood:

1. On asphalt tile, linoleum, vinyl, wood: rub with cloth dampened in clear cold water. If stain persists, dampen cloth with ammonia.
2. On concrete, marble, oxychloride cement, terrazzo: rub with cloth dampened in clear cold water. Bleach with peroxide if stain persists.

Chewing Gum:

1. On concrete, linoleum, marble, oxychloride cement, terrazzo, wood: remove gum with putty knife. Apply gum remover, wipe with clean cloth.
2. On asphalt tile: remove gum with putty knife. (The use of dry ice will make the gum easier to remove).
3. On vinyl: remove as much as possible with putty knife. Rub with cloth dampened with gum remover.

Grease or Oil:

1. On asphalt tile, linoleum: scrub with warm all-purpose synthetic detergent solution. Rinse with clear water.
2. On concrete: pour alcohol on spot. Rub on spot. Rub with clean cloth.
3. On marble, terrazzo, oxychloride cement: pour solvent on spot, cover with Fuller's earth and let stand for several hours. Repeat if necessary.
4. On vinyl, wood: pour kerosene on spot. Permit to soak for a short time. Wipe dry with a clean cloth. Wash with all-purpose synthetic detergent solution, rinse dry.

Ink:

1. On asphalt tile, concrete, linoleum, marble, oxychloride cement, terrazzo: use warm all-purpose synthetic detergent solution. If stain persists, mix two tablespoonfulls sodium perborate in pint of hot water. Mix whiting to form paste. Apply to spot and let dry.
2. On vinyl: wash with all-purpose synthetic detergent, rinse, then dry. If stain persists, rub with cloth dampened with ammonia.
3. On wood: apply solution one quart oxalic acid crystals to nine parts warm water. Permit to stand until dry. Mop with clear water.

Iodine or Mercurochrome:

1. On asphalt tile: warm neutral soap solution.
2. On concrete, linoleum, wood: apply alcohol and rub with clean cloth.
3. On marble, oxychloride cement, terrazzo: apply alcohol and cover with Fuller's earth.
4. On vinyl: wash with all-purpose synthetic detergent, rinse, then dry. If stain persists, scrub with scrubbing powder and warm water.

Paint:

1. On asphalt tile: rub with steel wool and all-purpose synthetic detergent solution. If area is large, use steel wool on buffing machine.
2. On concrete: scrub with one pound (0.5 kg) tri-sodium phosphate in one gallon (5 L) of hot water. Rinse with clear water.
3. On linoleum: rub with #0 steel wool dipped in turpentine. Wash with all-purpose synthetic detergent solution and rinse.
4. On marble, oxychloride cement, terrazzo: rub with #0 steel wool dipped in turpentine.
5. On vinyl: Use oxalic acid solution or one pound (0.5 kg) tri-sodium phosphate in one gallon (5 L) of warm water.

Rust:

1. On asphalt tile: rub with #0 steel wool and all-purpose synthetic detergent solution.
2. On concrete: dissolve one part sodium citrate in six parts water. Mix with equal part of glycerine. Make a paste with whiting and apply to stain. For bad stains, wash with sodium citrate solution one to six parts; add pad soaked in sodium hydrosulfite for 10 to 15 minutes. Wash thoroughly with water.
3. On linoleum, vinyl: apply solution one part oxalic acid to nine parts warm water. Let dry. Rinse thoroughly with clear water.
4. On marble, oxychloride cement, terrazzo, horizontal surfaces: to 3 gallon (3 L) of water, add 1.9 pounds (1 kg) sodium citrate and 1 pound (0.5 kg) sodium hydrosulfite. Add enough water to make a gallon (5 L) solution. Cover stain with solution and let stand one-half hour. Absorb with cloth by rubbing. Rinse with clear water.

Vertical surfaces: make paste with whiting and 3 ounces (85 grams) sodium hydrosulfite. Apply with putty knife and allow to remain one hour. Wash with sodium citrate.
5. On wood: wash with all-purpose synthetic detergent. Rub with #0 steel wool if necessary.

Sole and Heel Marks:

1. On asphalt tile, linoleum, wood: rub with #0 steel wool or wash with allpurpose synthetic detergent solution
2. On concrete, marble, oxychloride cement, terrazzo: wash with all-purpose synthetic detergent solution and rinse.
3. On vinyl: rub with #0 steel wool dipped in all-purpose synthetic detergent solution.

Tar:

1. On asphalt tile: remove surplus with putty knife. Do not pour tar-removal product on asphalt tile. Wash with warm, all-purpose synthetic detergent solution.
2. On concrete, linoleum, vinyl, wood: remove tar with putty knife. Soak with tar-removal product. Rub with clean cloth. Wash with all-purpose synthetic detergent solution.
3. On marble, oxychloride cement, terrazzo: remove surplus with putty knife. Soak with alcohol and cover with Fuller's earth.

Carpet Vacuuming

Equipment Required:

- An upright vacuum pile brush with revolving brush powered by a separate motor.
- A commercial upright carpet vacuum (with revolving brush and beater bar).
- A tank-type commercial vacuum (may be a wet and dry pick up type) set up for dry vacuuming complete with wand and carpet tool.

Instructions:

1. A carpet needs regular cleaning. Daily or more frequent cleaning is desirable on heavily traveled areas or near a street entrance. Non-slip carpet walk-off mats are recommended at entrances to aid in keeping dirt, dust, snow, rain and the like, that might be tracked in on the installed carpet at a minimum. Water may be removed from a mat by using a wet pick-up vacuum.
2. Proper vacuum equipment includes an upright vacuum pile brush that combines strong suction with a revolving brush driven by a separate motor, a lighter weight upright machine with vacuum and brush/beater bar operated by a single motor. The type of machine equipped with a brush and beater bar not only removes surface litter, but also removes soil embedded deep in the pile. The straight suction or tank-type vacuum would do an excellent job in lightly trafficked areas by removing surface litter and dust, as well as getting into difficult-to-reach places such as under furniture.
3. When using an upright vacuum pile brush with a separate motor driving the brush on carpets with light soiling, it should require only one stroke or pass. For maximum speed and efficiency, it is recommended that the operator go from one end of the carpet, or as far from the electrical outlet as cable permits, then return alongside and slightly overlapping the edge of the first pass. For medium soiling which requires two passes, the operator should return over the same patch. Heavy soiling requires at least three passes over the same path. Generally, this machine should be limited to a scheduled once a week thorough and special projects work. Daily use of this type of machine may pull carpeting from floors and tack strips, or loosen tufts from backing, or cause undue wear if improperly adjusted or used by inexperienced personnel.
4. The use of a commercial upright carpet vacuum will take three times the number of passes required by the heavy-duty machine over a given area. This is the type machine that should be used for daily maintenance. It is more maneuverable, requires less precise adjustment, is relatively inexpensive and is less likely to cause carpet damage.

5. A commercial tank-type vacuum with wand and carpet tool should be used for removing light soil from areas which are inaccessible to the upright machines, vacuuming the area adjacent to walls and for removing water from wet carpets and mats. If an area needs a thorough vacuuming, use one of the upright model carpet vacuums.
6. Be sure to keep the cleaners mechanically fit for best results. Brushes should be kept clean and replaced when worn. The dirt bag should not be allowed to fill more than halfway and should always be emptied at the end of the shift.
7. In order to obtain the best results, the proper cleaning frequencies should be established using the procedures as a yardstick. Generally, they break down to a two-step schedule:

Daily:	Dry vacuum using a commercial upright vacuum with a motor driven brush and beater bar. Usually concentrate on traffic patterns.
Weekly:	Vacuum hard-to-get-at areas, using a tank-type dry vacuum with wand and carpet tool.

Carpet Shampooing

Materials Required:

- Dry foam shampoo
- Carpet spot remover materials

Equipment Required:

- Heavy-duty vacuum/pile brush
- Carpet shampoo machine
- 15 liter plastic bucket
- 250 ml funnel
- 250 ml measuring cup
- Spot-cleaning equipment

Instructions:

1. Custodial personnel should thoroughly clean street shoes before starting operation. If possible have available clean sneakers or other rubber-soled shoes which can easily be wiped clean.
2. Move furniture out of way if possible. Vacuum carpet thoroughly using pile brush or heavy-duty vacuum -to remove loose soil.
3. Remove any spots or stains with shampoo solution in small plastic spray bottle.
4. Be sure that the drain valve in shampoo machine is tightly closed and that the wheels of the machine are clean.
5. Using a small funnel add water, warm if possible, and carpet shampoo in proper ratio to a solution tank of shampoo machine. Do not overfill. Secure cap tightly on tank.
6. Place machine on carpet, lower handle to operating position and adjust brush height so that the brush touches the top of the carpet pile. Generally the brush should be raised on deep pile carpeting and lowered on short pile carpeting.
7. Move forward and backward on each pass, then overlap by 50% and do adjacent pass. In this way every portion of the surface will be shampooed four times. Generate foam continuously and move with a slow steady pace so that all of the carpet is cleaned. If pace is correct, there will be little, if any, foam left on the carpet or deposited at the edges of the machine.
8. Remove soil and moisture with wet/dry vac, allow the carpet to dry for about 30 minutes, then pile brush thoroughly to remove soil and to lay the pile in one direction.
9. When replacing furniture with metal slides on freshly shampooed carpet, use paper or plastic under glides to prevent formation of any rust spots.

10. Extreme care should be taken when necessary to transport shampoo machine from one location to another, handle should be in the upright position so that the brush is off the floor when tilted back on transport wheels.
11. If machine becomes noisy or labors, brush may be too low or there may be insufficient foam. Adjust brush height and/or replenish foam as required.
12. When storing machine, wind cord around handle for safekeeping. Always use grounded plug and three-prong grounded outlet.
13. If carpet is very badly soiled, it may be desirable to clean in two directions rather than just one. First clean in one direction, then repeat process at right angles to first direction. This procedure will also help to eliminate any possible streaking due to redeposition of loosened soil.

Removing Carpet Stains

The removal of stains from carpets should be done carefully and cautiously. Try to clean a small, inconspicuous "test" spot before beginning the stain removal of a larger area. Try to determine the cause of the stain before attempting removal. Supervise the work carefully. Because of the many variables of surfaces, dilutions, applications and supervision, care must be exercised in the use of this chart.

In general, work from the outside to the inside of the stain area to prevent spreading and formation of rings. For fresh stains, blot-up as much of the staining material as possible before beginning the stain removal.

Acids:

Use ordinary household ammonia to neutralize the acid, but allow the ammonia to stay on only a moment. Rinse thoroughly with a cloth and cold water.

Candle Wax:

Remove as much as possible with a dull knife. Cover with a clean dry blotter and then press with a warm iron. Sponge with Chlorothene (toxic chemical; handle carefully, do not inhale fumes, provide adequate ventilation).

Candy:

Scrape off with a dull knife. Apply Chlorothene. Sponge with hot water. (For chocolate, use lukewarm water, then follow with pepsin powder rubbed in, then sponged-out after 30 minutes).

Chewing Gum:

Scrape off with a dull knife. Apply Chlorothene.

Coffee:

Lather on a paste of egg yolk and warm water. Add a few drops of alcohol for an old stain. Rinse with clear water. (If creamed coffee, treat for cream).

Cream, Ice Cream or Milk:

Place a pan under the rug at point of stain. Pour on hot water, allowing it to soak for a while. Remove traces with hot water and cloth. Finish with Chlorothene.

Enamel, Lacquer, Paint, Varnish:

Apply turpentine, then wash with strong, lukewarm soapsuds. Rinse with clear water and let dry. For a dry stain, apply half benzene, half denatured alcohol, working out the softened paint with a dull knife. Repeat as necessary for complete removal.

Grease, Oil or Tar:

Apply Chlorothene with a cloth, using a circular motion and working from the edge of the stain to the center to avoid causing a ring.

Ink:

Place a pan under the rug at point of stain. Pour on milk, allowing it to soak for a while. Use Chlorothene to remove grease left by milk.

Mud:

Allow to dry thoroughly, then brush off and vacuum.

Shellac:

Place paper under rug to protect floor, then rub with alcohol.

Soot:

Cover with dry salt. Then sweep both up together and vacuum.

Tea:

If clear tea, use mild soap and clear water. If it contains cream use Chlorothene.

Wall and Ceiling Washing

Materials Required:

Detergent

Equipment Required-Method A:

Scaffolding or ladder
2 buckets
2 sponges
Vacuum or triangular dust mop
Large drop cloth

Equipment Required-Method B:

2 buckets
Light weight sponge mop
Triangular dust mop or second sponge mop
Sponges or cloths
Large drop cloth (if needed)

Instructions-Method A

1. Remove all furniture, pictures and other objects from area to be cleaned.
2. Remove excess dust and cobwebs from ceiling and walls with vacuum or dust mop. Use bottom-to-top stroke to catch hanging cobwebs.
3. Make cleaner solution in warm water.
4. Fill second pail with warm, clear rinse water. Change water frequently.
5. Spread drop cloth to control spillages and move it as you progress.
6. Be sure ceiling is washable (metal or plaster). Begin at one corner of the ceiling. Sponge the cleaner-disinfectant solution onto an area about four feet square. Use a left-to-right stroke.
7. Squeeze cleaner-disinfectant sponge dry and pick up the cleaner-disinfectant solution.
8. Apply rinse sponge to the same area, then squeeze dry and pick up rinse water.
9. Continue across ceiling in this manner until finished.
10. Begin at the bottom of the wall and work toward the top, following the same washing and rinsing technique used on the ceiling. Try not to let solution run down wall.
11. Wash adjacent woodwork and baseboards using above methods.
12. When possible, two people should wash walls as a team, one doing the lower half, the other following with the upper half.
13. Clean all equipment and return to housekeeping storage areas.

Instructions-Method B

1. Complete steps 1 through 5 as above-Method A.
2. Dip sponge mop in cleaner solution and squeeze it to the point where it is wet but not dripping.
3. Wet the ceiling or wall area to be cleaned. It is usually desirable to work from the top down with this method. To remove marks or heavily soiled spots, squeeze the mop out and touch it to scouring paste and rub the soiled area carefully.
4. Rinse the area using the triangle dust mop or second sponge mop, wetting it in clear rinse water. Wring the mop out by hand or by pressing it before applying to wall or ceiling.
5. When cleaning or rinsing walls, be careful not to wet acoustical ceilings. The small wall area near the ceiling should be cleaned with a hand sponge.
6. Wash adjacent woodwork and baseboards using sponges.
7. When possible, two people should work as a team, one washing and the other rinsing.
8. Clean all equipment and return to maintenance storage areas.

Cleaning Chalkboards

Types of Chalkboards:

- Porcelain
- Slate
- Gypsum or Plaster
- Asbestos Fibers and Cement
- Cement

It is poor practice to use oiled cloths or dust-treated cloths in cleaning boards. The slight oil film they leave on the surface may make them appear darker and therefore cleaner. However, this is only an illusion. Actually, the oil combines with chalk dust and soil and forms a dirty, greasy compound that settles in the pores, producing a slick, shiny surface.

Dry-Cleaning Chalkboards:

Equipment Required:

- Two large soft cloths
- One chamois skin or mounted chamois pad
- One large chalkboard eraser

Instructions:

1. Remove all crayons and erasers from trough.
2. Erase chalk marks with eraser using up and down strokes.
3. Starting at one end, with a cloth or chamois folded flat to fit the hand or
over a large eraser, complete the cleaning, working from left to right.
4. Continue this procedure, moving from one area to next. Refold cloth or chamois frequently to present clean surface to board. When cloth becomes dusty, shake out in your waste receptacle to remove loose particles.
5. Start at one end of chalk trough and clean it with the separate cloth brought along for this purpose.
6. Replace chalk and erasers in the chalk trough.
7. Clean cloth and chamois.

Washing Markerboards and/or Chalkboards:**Equipment Required:**

- One pail 2/3 full of clean, clear water
- Heavy (large) soft cloth
- Cloth for board
- Window squeegee

Instructions:

1. Remove all markers, chalk, crayons, and erasers from tray.
2. Erase board using board eraser.
3. Fold towelling neatly to make large pad.
4. Dip the towelling in water and then wring it out. It should be fairly damp, but not dripping wet.
5. Starting at one end of the board, at upper corner, hold folded towelling pad with two hands.
6. Walk toward the other end of the board, cleaning in one continuous sweep, reaching the end of board, reverse pad, making sure to overlap. Walk back to other end of board.
7. Reverse pad, walk to other end of board. Repeat until all board area has been washed.
8. If you find the board is too wet, a squeegee may be used to remove the excess water.
9. Using a separate cloth for the purpose, run over entire length of marker/chalk tray, cleaning out the dust.
10. Replace marker, chalk, crayons, and erasers.
11. Clean and store tools.

Breaking-in-Method (for Chalkboards):

Cover entire chalkboard surface with the broad side of a piece of high quality white chalk. Rub chalk dust into all pores with a felt brush or dry cloth. Remove all loose dust from surface of the boards with a dry cham-
ois.

Note:

This is to be done on all new chalkboards, and every time the chalkboards are washed.

Voluntary Work-Safety Guidelines

The US Occupational Safety and Health Administration (OHSA) has recommended ways to institute a voluntary work-safety program. OHSA's guidelines as reported by Cleaning & Maintenance Management (____, ER-3) are:

1. Management commitment and employee involvement
 - Write a worksite policy explaining the priority of safety and health.
 - Set a clear goal for the safety and health program.
 - Involve top management in implementing the program.
 - Involve employees in program operation decisions.
 - Assign responsibilities.
 - Provide authority and resources to responsible parties.
 - Hold managers, supervisors, and employees accountable.
 - Annually review program operations.
2. Worksite analysis
 - Identify all hazards.
 - Regularly inspect site safety and health conditions.
 - Encourage employees to notify management of hazardous or unsafe conditions.
 - Analyze injury and illness trends.
3. Hazard prevention and control
 - Ensure hazards are corrected through engineering techniques, safe work practices, personal protective equipment and administrative controls.
4. Safety and health training
 - Ensure all employees understand the hazards and how to protect them.
 - Make sure supervisors and managers understand their responsibilities.

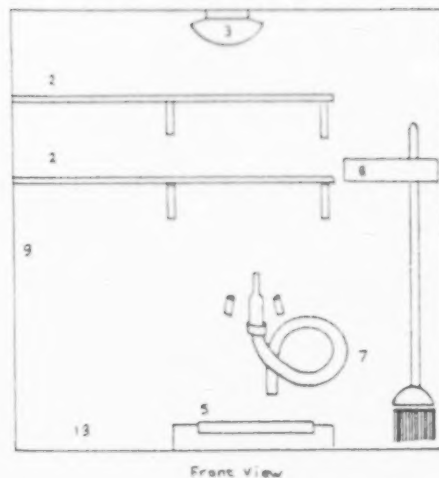
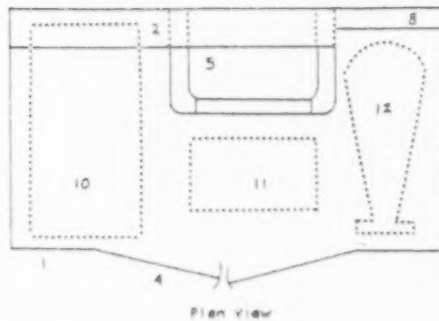
References:

OSHA introduces voluntary work-safety guidelines (April 1998). CM Cleaning & Maintenance Management, Vol. 35, No. 7. Latham, NY: National Trade Publications.

Reference Section

This section contains examples of forms/procedures that can be modified for use by each school district.

Custodial Equipment Storage and Care



Custodial Closet
(2-worker, minimum)
1/2-inch Scale

Legend

1. Dimensions: 8' long, 4 1/2' deep (36 square feet)
2. Shelving 10" deep, with bracket supports
3. 100-watt lamp, with door hinge switch
4. Two 30" doors, pierced for ventilation, and lockable
5. Utility floor sink, with stainless steel lip cover. Not off-center
6. Bibb faucet with support hanger
7. 4-foot length of hose
8. Tool holder
9. Walls ceramic to 4' painted enamel (including ceiling) above 4'
10. Location for custodial cart or waste hamper
11. Location for 2-bucket (or 3-bucket) mopping outfit
12. Location for floor machine or vacuum
13. Floor-concrete, ceramic or terrazzo (not resilient)

Care Of Housekeeping Equipment

Dust Mops

1. Do not use on wet oily floors.
2. Treat the mop head by spraying after each day of use, but do not dip mop in the treatment or spray on too much treatment.
3. Hang up the mop with the head down, and not touching floor, when not in use.
4. When soiled, the mop head should be washed in lukewarm mild soapy water and rinsed thoroughly-this can be done in a washing machine set on "warm."
5. Be sure that the mop block or frame is on the proper size for the mop head, and that the tie cords are in proper repair and in place.

Floor Machines

1. Rest the machine on its wheels, not on its brush.
2. Clean the machine and the electrical cord after each use.
3. Regularly inspect the cord for fraying or loosening.
4. It is safest to wear rubber overshoes and rubber gloves when operating on a wet floor.
5. Keep a small inventory of spare parts.
6. Check on nuts, bolts or screws that may work loose.
7. Motor adjusting or repair should be done only by a qualified electrician.
8. In machines having solution tanks, be sure to empty and clean the tank and lines after each use.
9. If grounding plugs are furnished, be sure to use them.

Floor Machine Brushes

1. Turn the brush into place on the machine by hand — do not turn on the floor machine until the brush is on.
2. Hang up the brush or lay flat on its back — do not let it stand in storage on the bristles.
3. Comb the bristles regularly to remove foreign matter and to eliminate tangling.
4. Refill steel blocks when bristles are wore. Worn wooden blocks, if in good condition, may be used as steel wool holders.
5. Never use a brush having a loose or broken adapter plate.
6. Be sure to use the proper brush for the job to be performed.
7. Although washing the brushes is recommended, try not to get wood blocks too wet; dry them when they are wet.

Mop Bucket and Wringer

1. Keep working parts properly oiled.
2. Keep screws and bolts tightened.
3. Keep casters properly lubricated and in good repair and replace them when necessary.
4. Clean both bucket and wringer after each day's use.
5. Too much force on wringer can break it; do not lengthen handle or press too hard on the foot lever.
6. Make sure bucket and wringer are large enough for the mop that is being used.
7. Remove loose mop strands and other articles caught in the wringer.

Push Brooms

1. Rotate the brush frequently so as not to unduly wear one side.
2. Do not lean heavily on the handle.
3. Do not let the brush stand on the fibers as it will bend them out of shape and make the brush useless.
4. Use only for purposes intended; never as a mop, squeegee, lever, or hammer.
5. Be sure you have a large enough brush for the job.
6. Combing the brush every week or so will keep it in best operating condition.
7. Brushes with natural bristles can be attacked by moth larvae, if in storage for some time. Protect them with moth balls, para crystals or insecticides.

Squeegees

1. Wipe blades dry after each use.
2. Keep a spare set of blades on hand.
3. Do not store squeegees or spare blades where they can be affected by sunlight.

Vacuums

1. Follow the warnings given earlier for floor machines concerning wiring.
2. Be sure to empty vacuum-wet or dry-after every use.
3. Check automatic cut-off mechanism frequently to make sure water does not enter the motor.
4. Tank should be cleaned at least every month with a disinfectant solution to prevent growth of bacteria and algae.
5. Store vacuum in an open position to allow entry of air (square-type tanks are ideally made for this).
6. Always use a filter bag when dry vacuuming.

Wet Mops

1. Do not twist or squeeze the mop too hard as it will break the strands.
2. When in storage, do not let wet mop touch other equipment.
3. Be sure that the wet mop receives a rinsing and is wrung after each use.
4. Be careful in using the mop on splintered floors or floors with projecting nails, so as to not catch and tear the strands.
5. Economy of effort dictates that worn mop heads should be replaced.
6. When storing mops, hang up so that the mop does not touch the floor and so that the strands do not touch the wall.

Above-Floor Surface Cleaning Equipment

1. Ten-quart (10 litre) plastic pail
2. Short handled dusting tool (untreated) for low and high dusting
3. Clean cloths and dusting cloths
4. Two hand-size cellulose sponges
5. Plastic spray bottle with glass cleaner
6. Plastic spray bottle with stainless steel cleaner
7. Plastic spray bottle with detergent solution
8. One quart (litre) plastic bottle with clear water
9. Furniture polish
10. Quart (litre) plastic bottle of lotion-type cleanser
11. Radiator brush for dusting hard-to-get-at and rough surfaces
12. Quart (litre) plastic bottle of detergent
13. Small funnel
14. Eight-ounce (250 ml) measuring cup
15. Folding waste cart with platform and equipment carrying caddy bag or hampers and barrels.

Rest Room Cleaning Equipment

1. Eight-ounce (250 ml) measuring cup
2. Straight broom
3. Dust pan
4. Paper supplies
5. Hand soap
6. Sanitary napkins
7. Ten-quart (10 litre) plastic pail
8. Gallon (5 litre) plastic jug of cleaner-disinfectant with one-ounce (30 ml) dispensing pump
9. Glass cleaner in plastic spray bottle
10. Bowl brush and/or bowl mop

11. Quart (litre) plastic bottle of lotion-type cleanser and/or scouring powder
12. Clean cloths
13. Stainless steel cleaner-polish in plastic spray bottle
14. Short handled dusting tool (untreated) for high and low dusting
15. Quart (litre) plastic bottle of bowl cleaner
16. Two cellulose sponges
17. Cleaner-disinfectant in spray bottle
18. Small funnel
19. One cotton mop and mopping outfit (if not included with a set of routine floor care equipment). This may be a 16-ounce (500 gram) mop with an appropriate size wringer. May have large metal cart with shelves.

Routine Floor Care Equipment

1. Floor machine usually about 19" (50 cm) with pad holder or auto-scrubber
2. Single or double mopping outfit or mop tank
3. Swivel dust mop, usually 24" (60 cm)
4. Wide dust mop for areas with large areas of open space (30" or 36"-75 cm or 1 m)
5. Push broom (where soiling is heavy or wet)
6. Spray-buff pads
7. Dust pan and putty scraper (other tools, such as scraper and shovels, as needed)
8. Gallon (5L) plastic jug for spray-buff solution
9. Plastic spray bottle
10. Small plastic funnel
11. Eight ounce (250 ml) measuring cup

FIGURE 12
Inventory Order Form
University City School District

Materials and Supplies

MONTHLY ORDER				MONTHLY INVENTORY				UNIT MASTER				PRICE MASTER			
Unit Name				Region No.				Unit No.				Issued by			
								Issue date				Delivery date			
QUANTITY			ITEM			COST	QUANTITY			ITEM			COST		
Inv	Order shipped	Unit of Meas	Code	Name			Inv	Order shipped	Unit of Meas	Code	Name				
1 CONTAINERS							2 CLEANING COMPOUNDS								
		500	105	Plastic Bag 15x9x24					gal	305	Grime Go				
		500	110	Plastic Bag 15x9x33					gal	310	Ormolene 2				
		250	115	Plastic Bag 16x14x37					gal	315	Germ Pure Detergent				
		250	120	Plastic Bag 20x13x40					1/2 gal	320	Germ Detergent				
		250	125	Plastic Bag 35x9x50					gal	325	Stripper A				
		each	140	Plastic Pail 5 qt					gal	330	Stripper B				
		each	145	Plastic Pail 12 qt					gal	335	Glass Cleaner				
		each	150	Metal Pail 14 qt					gal	337	White Vinegar				
		doz	160	Plastic Jug 1 gal					gal	340	Spray-Buff Solution				
		doz	165	Corr box 12x12x12					gal	341	Tile Cleaner				
		6 pk	170	Vac Bag Clark N5					gal	345	Ammonia				
		6 pk	175	Vac Bag Clark CM					gal	350	Carpet Shampoo				
		6 pk	176	Vac Bag Clark 550					gal	355	Rug Am. Static				
		4 pk	177	Vac Bag Hoover Const					gal	360	Hand Soap				
		4 pk	180	Vac Bag Hoover #13					case	362	Bar Soap — Dial #66				
		10 pk	181	Vac Bag RCA all					100#	365	Laundry Detergent				
									gal	370	Map Treatment				
									drum	372	Wax Base Sweep Comp				
									each	375	Bowl Cleaner Bleach				
									each	380	Aqua Cleaner Bleach				
									each	385	Furniture Polish				
									each	388	Metal Polish				
									can	390	Gum Remover — 10 oz				
									tube	395	Deodorant Blocks				
				TOTAL VALUE							TOTAL VALUE				
2 FLOOR FINISHES & SEALER							4 PAPER PRODUCTS								
		gal	205	Metalic A					case	405	Fold Tissue				
		gal	210	Metalic B					case	410	Tissue 500 double				
									case	411	Tissue 1000				
									case	415	Vertex Towels				
									case	420	Scott Towels				
									each	424	Vertex Dispenser				
									case	425	Modess #4				
									case	426	Modess #B				
									case	430	Meds				
									case	432	Napkin Bag				
				TOTAL VALUE							TOTAL VALUE				

QUANTITY			ITEM		COST	QUANTITY			ITEM		COST
Inv	Order shipped	Unit of Measure	Code	Name		Inv	Order shipped	Unit of Measure	Code	Name	
1. CLEANING SUPPLIES						2. MISCELLANEOUS					
		each	505	Bowl Swabs				250	605	Electric cord 16/3	
		each	506	Bowl Brush				250	610	Electric cord 18/3	
		each	507	Short Handle Pot brush				250	620	Electric cord 600v	
		each	509	Radiator Brush				roll	622	Electric tape	
		each	510	Hand Custer				each	625	Universal clutch	
		each	511	Whisk broom com				each	630	3" ball caster	
		each	515	Pony knife				each	635	Tool holder	
		each	516	Sponge, synthetic				each	640	1 gallon pump	
		each	517	Sponge, natural				each	645	Vac bell	
		each	518	Hand pad				each	650	30 55 gallon pump	
		each	519	Spray bottle, complete				each	655	12 way Electric Plug	
		1 lb	520	Dust cloth, disposable				each	657	Flashlight	
		each	522	Cust cloth				each	658	Flashlight battery	
		1 lb	523	Wiping cloth				pair	660	Rubber glove #8	
		doz	525	Map head, 12 string				pair	661	Rubber glove #9	
		doz	526	Map head, 12 web 5"				pair	662	Rubber glove #10	
		doz	527	Map head, 18 string				Box	665	Wire ties 4 1/2"	
		doz	528	Map head, 18 web 5"				roll	668	Masking tape 4"	
		doz	529	Map head, 20 string				each	669	Razor blades - industrial	
		doz	535	Sorax buff pad 15"				each	671	Funnel 8 oz	
		each	536	Sorax buff pad 17"				each	672	Funnel 12 oz	
		each	537	Sorax buff pad 18"				each	673	Measuring cup	
		each	538	Sorax buff pad 19"				each	375	Winger Spring #16	
		each	539	Sorax buff pad 20"				each	376	Winger Spring #10	
		each	545	Shipping pad 15"				each	677	Winger spring SE 1	
		each	546	Shipping pad 17"							
		each	547	Shipping pad 18"						TOTAL VALUE	
		each	548	Shipping pad 19"							
		each	551	Steel wool #00							
		five	560	Squeegee handle							
		each	561	Squeegee blade 10"				each	705	Counter brush	
		each	562	Squeegee blade 12"				each	710	Rug brush - coarse	
		each	563	Squeegee blade 14"				each	711	Rug brush - fine	
		each	564	Squeegee blade 16"				each	715	Pipe brush	
		each	565	Squeegee blade 18"				each	720	Astroten mop 24"	
		each	571	Squeegee channel 10"				each	722	Astroten mop 48"	
		each	572	Squeegee channel 12"				each	725	Broom can	
		each	573	Squeegee channel 14"				each	726	Push broom head 18"	
		each	574	Squeegee channel 15"				each	727	Push broom head 24"	
		each	575	Squeegee channel 18"				each	728	Push broom handle	
								each	730	Wet mop handle 54"	
								each	731	Wet mop handle 60"	
								each	735	Cust mop frame 24"	
								each	736	Cust mop frame 48"	
								each	740	Floor squeegee 8"	
								each	745	Window pole 4 8" ext	
								each	750	Cust can - short	
								each	755	2 1/2 gallon carbon	
										TOTAL VALUE	
				TOTAL VALUE						TOTAL INVENTORY	\$

FIGURE 13
The Carleton Board of Education
Custodial Equipment Inventory Sheet

School:

Date:

	1	2	3	4	5	6	7
Equipment	Quantity	Make	Size	Model	Serial	Condition	Remarks
Scrubber							
Scrubber							
Wet/Dry Vacuum							
Wet/Dry Vacuum							
Dry Vacuum							
Dry Vacuum							
Upright Vacuum							
Upright Vacuum							
Utility Carts							
All-Weather Matting							
Lawn Mowers							
Gasoline Safety Cans							
Spreader							
Garden Hose							
Sprinklers							
Snow Blowers							
Gravely (Tractor)							
(Snow Blower)							
(Power Broom)							
(Grass Cutter)							
Step Ladders							
Extension Ladder							

To be completed by the Building Superintendent. Columns 1 to 7 to be completed where applicable

Selection, Use, and Care of Wet Mops

Selection

1. Select the proper size mop for the job to be done. Use as large a mop as can be handled regularly by the user without undue fatigue and as the space permits.
2. Mop sticks with removable mop heads provide these advantages:
 - The entire mop head is in use (about 1/3 of the mop on a wooden stick cannot be used because of the method by which it is fastened).
 - The removable mop head is more easily cleaned and dried.
 - The removable mop head limits the entrapment of soil and other particles.
 - The mop lies flatter on the floor, covering a larger area, and is more easily turned from one side to the other.
3. Rayon mops have the advantage over cotton of being lighter, much more absorbent, more easily rinsed, and requires less effort and time for a job.
4. Cotton mops are superior to rayon mops for applying water emulsion wax.

Use

1. The basic purpose of the wet mop is to transfer liquid to and from floors. The use of mops for other purposes should be discouraged.
2. Soak a new mop in warm water for at least 20 minutes before use, in order to remove excess oils and expel entrapped air, providing better absorbency.
3. Important: Change mopping water frequently while mopping to prevent the water from becoming overly dirty. Rinse the mop each time the water is changed. Dirty water will cause a redeposit of soil during mopping, leaving soil streaks.
4. While mopping, the mop should stay on the floor, and should not be flung about.
5. The mop should be turned from one side to the other frequently while in use in order to expose more clean moist strands.
6. Wherever possible, the use of mop squeezers are recommended over roll-type wringers. The squeezer is more efficient in the removal of moisture from the mop and is far less destructive to the mop. Mops should be squeezed or pressed carefully to remove water; twisting the mop will tear or weaken the strands.
7. Mops can be used for scrubbing small areas and spots by folding the mop over on itself so that the tips of the strands are in direct contact with the floor, under pressure. Never scrub with the part of the mop closest to the holder because this will tear the strands.
8. Avoid the use of mops with lye, caustics, or strong undiluted cleaning solutions because these materials attack the mop strands.

9. If a rough surface is to be mopped (such as splintered wood), mop very carefully and try to mop in a direction which will avoid snagging. It is best to reserve a special mop for use on such surface.
10. It is not economical to continue to use worn-out mops; they should be discarded.

Care

1. Always rinse a mop carefully after use and squeeze it dry.
2. Mop should be stored in a warm dry area where air circulates freely.
3. A mop in storage should be hung with the yarn away from the wall, strands down.
4. Do not let wet mops touch each other, other equipment, or come in contact with walls.
5. If mop strands become loosened, they should be removed or cut off with scissors in order to prevent snagging and splattering.
6. Important: In addition to rinsing the mop whenever the mopping water is changed, the mop should be carefully washed periodically (daily if possible). The frequency of washing will depend upon the use to which the mop is put, but mops in regular use should be washed carefully at least weekly, preferably before the week-end. Where a number of mops are in regular use, it is practical to use a mop washing machine which exposes the mop to a high-pressure clear water bath.

FIGURE 14
Preventive Maintenance
Service Systems Corporation
Engineering Division

Location: Senior Boiler Room

Unit: Air Compressor

Used for: Pneumatic Controls

S/N 5501

Motor

HP: 2

RPM: 1740

MFR: Westinghouse

Belt Size: B79

Frequency of Service: Continuous

	1985	1986	1987	1988	1989	1990
JAN						
FEB						
MAR						
APR						
MAY						
JUN						
JUL						
AUG						
SEP						
OCT						
NOV						
DEC						

NOTE: CHART TO BE INITIALED AND DATED BY PERSON COMPLETING SERVICE

OBSERVE AND
CLEAN AS FOLLOWS:Operation-check weekly, check belt tension, oil level,
lubricate as needed.
Unit A4 annual

A-4 Air CompressorFrequency: **Annual****Check points.** Review manufacturer's instructions.

1. Test the pressure gauges and cut-out and cut-in pressure.
2. Check safety valve.
3. Listen for knocks, and inspect for mechanical failures. Report any leaks to supervisor.
4. On water cooled compressors check for incrustation or excessive corrosion.
5. Clean moisture traps in systems.
6. Change oil in crankcase.
7. Check controls, belts, pulleys, alignment.
8. Check air cooled heat exchanger.
9. Check motor, bearings, starting switches, controller, pressure switches.
10. Clean equipment, touch up or repaint as required.
11. Comply with lubrication schedule.

A-4 CompressorFrequency: **Annual**

Safety Precautions

Safety Checklist For Floor Maintenance

Correct maintenance should mean not only attractive and sanitary surfaces, but also safe surfaces, both in the application of maintenance materials and in the later inspection of results. Attention to this checklist may prevent an accident.

1. Is the lighting adequate to prevent walking into obstructions, slipping on foreign articles and so on? (The best way to check this is at night).
2. Are warning signs posted at the ends of hallways and other areas as an indication that floors are being maintained and are wet or slippery?
3. Are floors stripped according to schedule to prevent build-up of old wax?
4. Are floors kept dry?
5. Are rain, spilled oil or other spilled liquids, dried up immediately?
6. Are the floors swept, dust mopped and policed regularly? (A paper clip, a thumb tack, a penny, can cause a dangerous fall).
7. Are there any projections from the wall which are dangerous? (Broken door stops, direction signs projecting at eye-level and other hazards, can cause serious accidents).
8. Do any damaged tiles or baseboards need replacing to prevent tripping?
9. Are any composition floor areas being softened because of solvent action?
10. Are you using a floor finish that is sufficiently slip-resistant for the area in which it is being used? (Check for UL approval).
11. When the floor is being scrubbed, is any soap left which might soften the finish?
12. Are any nail heads projecting from the floor that might cause tripping or damage of equipment? (In addition to driving them, countersink and putty the hole as well).
13. Are electrical equipment cords in good repair? Are they red or yellow in color? Are they grounded?

Safety Instructions for Electrical Equipment

Everyone is susceptible to electric shock, and more so when the hands or feet are wet, either through water or their own perspiration.

1. Electricity cannot be seen. Assume all equipment to be alive (power on) unless the main switch is off or the power disconnected.
2. Do not work on live equipment.
3. Water hoses are not to be used to wash down areas containing electrical equipment at any time.
4. Wear gloves when changing lamps. Turn the switch off.

5. In all cases of electric shock, immediate artificial respiration should be applied as soon as the person can be safely freed from the electric circuit. Dry wood, rope or clothing should be used to free a person from the electrical contact. Do not try to pull the person free with your bare hands, as you will also receive the electric shock through the other person's body.
6. Form the habit of operating motor starters and switches with your left while standing to one side, facing away from the switch or starter box. The handles of switches and starters are generally on the right side. If a flash should occur, your body would be out of direct line.
7. Do not undertake any work you are not qualified for. All work involving repairs other than operating repairs should be done by qualified staff.

Safety Instructions for Fluorescent Light Tubes

1. Fluorescent light tubes require specific handling. They are not to be removed or destroyed by unauthorized persons.
2. The following precautionary measures are recommended where fluorescent lamps are to be broken for disposal:

Where Only a Few Lamps are Involved on Infrequent Occasions:

1. If possible, break lamps out of doors in a waste area, and in a waste container.
2. Take adequate protection against flying glass.

Where Large Quantities of Lamps are Involved:

1. Break outdoors, or in a well ventilated indoor area. The use of waste container and local exhaust ventilation will minimize the dispersed material and mercury vapor.
2. In most cases it is not to be expected that the small amount of mercury contained in each lamp will cause any difficulty. However, under unusual conditions where large quantities of lamps are being broken in an enclosed poorly ventilated area, mercury vapor concentrations should be measured. Most local health authorities have proper measuring equipment. If values exceed the maximum allowable concentration (0.1 milligrams of mercury per cubic meter of air for an 8-hour per day exposure), the ventilation should be increased or the workers should be provided with suitable respirators.
3. Provide employees with suitable protection against flying glass (goggles, face shields, etc.). Unbroken lamps may also be disposed of at a municipal dump with other non-burnable rubbish, provided municipal regulations permit.

Safety Instructions for Ladders

Use proper ladders. Never climb or stand on any "makeshift" devices, such as chairs, barrels, drums or boxes. Use approved equipment only. Safe use of ladders requires careful attention to all details of maintenance and use. When you use a ladder follow these safe practices:

1. Check the condition and strength. Ladders with broken rungs, split side rails, worn or broken safety feet, should not be used. Unsafe ladders should be repaired or destroyed.
2. Always place a ladder at least 25 per cent of its length away from the base of the structure to be mounted. The ladder feet must be placed on a firm surface.
3. Ladders longer than 16 feet should be carried by two people. When carrying short ladders, raise the front end to prevent striking someone in front of you or coming around a corner.
4. Nothing should be carried in either hand when climbing up or down a ladder. Materials should be hoisted separately or carried attached to your belt.
5. Only one person should be on a ladder at a time.
6. Always face the ladder when ascending or descending.
7. Clean muddy or otherwise slippery soles of shoes before mounting the ladder.
8. Do not attempt to reach more than an arm's length in any direction from the ladder. Move the ladder.
9. When a job is finished, the ladder should be returned to the ladder racks or storage area.
10. When workers on ladders could be endangered by ground traffic, a guard should be stationed and signs posted to direct people away from the area.
11. Never stand on the top rung of a ladder.
12. Metal and wirebound ladders should not be used where there is a possibility of contact with electrical conductors, unless they have rubber feet or are placed on an insulated surface.
13. Only ladders with proper safety feet, in good condition, may be used.
14. Standing or working on the top step of a stepladder is forbidden. Use a longer stepladder.
15. Never use a stepladder as a straight ladder-always open the legs fully and lock the braces.

Fire Prevention And Protection

The best means of fighting fires is to prevent them from starting. Do everything possible to prevent fires. If, however, a fire should occur, you should know exactly what to do.

1. Sound the alarm to clear the building.
2. Call the Fire Department. (This must also be done as a back-up even though the school is equipped with an automatic phone dialer).
3. Know the location of the fire extinguishers and the type of fire each is designed to extinguish, and use them to fight the fire if there is no danger to you, while the fire is still small.
4. If your clothing catches on fire, call for help. DO NOT RUN. If possible, wrap yourself in a fire blanket, coat, etc., or step under an emergency shower. Otherwise, roll on the floor to try and smother the flames. Avoid breathing the flames or fumes.
5. Aisleways, passageways, stairways and doorways should never be blocked. Do not pile materials closer than 18 inches to the sprinkler heads.
6. Flammable liquids should be stored only in special storage areas. Even small quantities of flammable liquids must be kept only in approved safety cans.
7. Whenever there is the possibility of flammable vapors, gases or dust, never use a portable electric tool, spark producing tool, ordinary electrical equipment, especially extension lights.
8. Refill gasoline motor vehicles at authorized spots only, using designated equipment. The motors of vehicles being filled should be turned off. Avoid spills. If a spill does occur, wash it up with large quantities of water before starting the vehicle. Motor vehicles should only be used outside buildings.
9. Gasoline or solvents having a flash point below 100F. or 38F. should never be used to clean the school or equipment.
10. It is mandatory that all exit doors are inspected daily to ensure they are operable and clear of snow and ice. A minimum area of 10 feet must be cleared back from all exit doors.

FIGURE 15
Fire Extinguisher Chart
 The Carleton Board of Education

TYPE	CLASS OF FIRE			U.C.L. RATINGS	MODELS Numbers indicate Capacity in lbs.	DISCHARGE RANGE (in feet)	MAINTENANCE
	 Ordinary Combustibles	 Flammable Liquids	 Electrical Equipment				
MULTI-PURPOSE DRY CHEMICAL  Monoammonium Phosphate	Excellent	Excellent	Excellent	5BC 2110BC 2A20BC 3A20BC 4A20BC 4A30BC 10A40BC 10A50BC	STORED PRESSURE TYPE (LEFT) ABC 1/2 P ABC 5P ABC 10P ABC 20P ABC 30P CARTRIDGE TYPE (RIGHT) ABC 10P ABC 20P ABC 30P	10-12 14-16 18-20 20-22 22-24 18-20 20-22 22-24	Inspect every 6 mos. Hydrostatic Test every 12 years
STANDARD DRY CHEMICAL  Sodium Bicarbonate	Small surface fires only	Excellent	Excellent	5BC 10BC 10BC 20BC 20BC 40BC	STORED PRESSURE TYPE (LEFT) PDC 1/2 P PDC 5P PDC 10P PDC 20P PDC 30P CARTRIDGE TYPE (RIGHT) PDC 10P PDC 20P PDC 30P	10-12 12-14 5-13 9-18 13-24 18-20 20-22 22-24	Inspect every 6 mos. Hydrostatic Test every 12 years
PURPLE "K" DRY CHEMICAL  Potassium Bicarbonate	Small surface fires only	Excellent	Excellent	20BC 20BC 20BC 30BC 60BC 80BC	STORED PRESSURE TYPE (LEFT) K 10P K 30P K 10P CARTRIDGE TYPE (RIGHT) K 10P K 30P K 10P	15-30 18-35 20-37 18-20 20-22 22-24	Inspect every 6 mos. Hydrostatic Test every 12 years
SUPER "K" DRY CHEMICAL  Potassium Chloride	Small surface fires only	Excellent	Excellent	30BC 60BC 80BC	CARTRIDGE TYPE SK 10C SK 30C SK 10C	18-20 20-22 22-24	Inspect every 6 mos. Hydrostatic Test every 12 years
CARBON DIOXIDE 	Small surface fires only	Good	Excellent	29C 58C 58C 58C	PSA-5 PSH-10 PSH-15 PSH-20	4 6 6 6	Weight and inspect every 6 mos. Hydrostatic Test every 12 years
PRESSURIZED WATER 	Excellent	No	No	2A 2A	STORED PRESSURE TYPE HW15P HW15P (2 1/2 US gallons)	40 40	Inspect every 6 mos. Hydrostatic Test every 12 years
SODA ACID 	Excellent	No	No	2A	SW-12 (2 1/2 US gallons)	40	Recharge annually Hydrostatic Test every 12 years
FOAM 	Excellent	No	No	2A-4B	PW-12 (2 1/2 US gallons)	40	Recharge annually Hydrostatic Test every 12 years
LOADED STEAM 	Excellent	No	No	2A-2B	STORED PRESSURE TYPE L-13P (2 1/2 US gallons)	40	Inspect every 6 mos. Hydrostatic Test every 12 years
CARBON TETRACHLORIDE 	DANGEROUS REPLACE IMMEDIATELY						

Energy Use Guidelines

Ventilation

Ventilation is probably the most difficult area to control because of the use of doors and windows. Most mechanical ventilation can be controlled by switches or timers without too much difficulty. The air in schools must be changed 6 to 10 times per hour. The unit used is cfm (cubic feet per minute), but there are no clear cut guidelines yet developed. The major contribution in this area of energy conservation is to do the following:

1. Keep exterior doors and windows closed during heating season.
2. Assign door monitors to be certain no wedges, rocks or lunch pails are used to keep exterior doors open.
3. Shut down the exhaust system when the building is unoccupied.

General Miscellaneous Items

Miscellaneous items to be aware of for energy conservation:

Lighting:

1. Reduce lighting levels to proper illumination standards as shown on chart.
2. Eliminate all display or decorative lighting.
3. Reset exterior lighting timers periodically to adjust for daylight and safety shut-off shall be at midnight.
4. Provide brightly colored light switch stickers to make us all aware of conservation.
5. Turn off any lights when leaving a room for any length of time.
6. Use task lighting in a classroom. Place those tasks that need more light near the windows if possible.
7. Use multiple switch lighting.
8. Label light switches to help the control of lights.
9. Clean light fixtures at least once a year.
10. Replace all discolored light lenses.
11. De-lamp on a regular basis, such as when lamps reach approximately 75 to 85 percent of their rated life.

Heating:

1. Set all thermostats in accord with the chart.
2. Reduce temperature in gymnasiums, rest rooms, and shops.
3. Shut heat off in most corridor areas. Be certain not to cause a freeze-up.
4. Keep heat in garages just above 50° and no more than 55°.

FIGURE 16
Energy Use Guidelines

**Danbury Public Schools
Temperature Settings**

HEATING	OCCUPIED	UNOCCUPIED
High School and all offices in other buildings	65 °	55 °
All Elementary Schools	68-70°	55 °
All Storage Areas	55 ° *	55 °

*Caution must be observed in order to prevent freeze-up.

COOLING	OCCUPIED	UNOCCUPIED
High School and all offices in other buildings	78°	OFF
Rogers Park, Broadview	78°	OFF
All Elementary Schools	78 °	OFF
All Storage Areas	OFF	OFF
HOT WATER	OCCUPIED	UNOCCUPIED
All buildings w/dishwasher	125-150°	OFF
All buildings without dishwasher	105 °	OFF

Lighting

The general recommended illumination levels are listed below in footcandles.

Classrooms	30-50 FC*
Special Education Rooms	75 FC
Offices	30-50 FC
Gymnasiums	30-60 FC
Libraries	30-60 FC*
Auditoriums	10-50 FC
Cafeterias	10-50 FC
Toilet Rooms	10-20 FC
Halls & Stair Towers	10-20 FC
Typing Rooms	40-60 FC
Wood & Metal Shops	30-50 FC
Drafting Rooms	60-75 FC
Graphic Arts	50-60 FC*

*Individual task lighting should be used in difficult areas.

5. Maintain the storage rooms between 50° and 55°.
6. Night set backs must be at least 10° lower than daytime settings.
7. Check all timers for correct time and set
8. Shut off boilers during mild weather.
9. Keep books and other items off any heating units, especially in classrooms.

Ventilation:

1. Reduce the time the exhaust fans are on.
2. Shut-off all exhaust systems during the unoccupied times.
3. Keep all vents free and clear.
4. Open windows for ventilation in mild weather unless HVAC system requires windows remain closed for proper operation.

Cooling:

1. Operate only when absolutely necessary.
2. Maintain thermostats in accord with the chart.
3. Do not cool spaces not occupied.
4. Shut down gymnasium vent system when students are outside.
5. Reduce heat gain from sunlight as much as possible.
6. Report any broken insulation on pipes or ducts.

Domestic Water Systems:

1. Set water temperatures as per chart.
2. Adjust flush valves for minimum use.

Kitchens:

1. Turn off all microwave, infrared or other food warmers when not warming food.
2. Clean all refrigerator and freezer condensers frequently.
3. Keep all refrigerator, freezer, or oven gaskets on doors in good repair. Clean gasket and mating surface daily.
4. Keep hot water use to a minimum. This must be constantly supervised.
5. Keep all refrigerator and freezer coils free of frost.
6. Reduce the size of coffee urns if possible.
7. Preheat ovens only for baking. Discourage unnecessary preheating.
8. Cook with lids on pots and kettles. In most cases, it will cut the time in half.
9. Thaw frozen foods in refrigerator.
10. Check fans so that they cool workers and not cooking areas.

Personnel Forms

FIGURE 17
New Employee Induction and Assignment
The Carleton Board Of Education

DATE _____

1. Employee's Name: _____

Starting Date: _____

Home Phone Number: _____ Address: _____

Assigned to: _____
2. Course of Action by Supervisor:
 - (a) Review the training program
 - (b) Issue a training manual
 - (c) Review the Department structure
 - (d) Review the rules and regulations
 - (e) Outline discipline procedures
 - (f) Introduce the Department Head
 - (g) Introduce the Foreman
 - (h) Assign the location of their work

Completed by: _____
3. Course of Action by Foreman:
 - (a) Verify name, present phone number and address
 - (b) Review probation period and what they will be evaluated on
 - (c) Actual shift they will work at the school
 - (d) The date of issue of their uniform
 - (e) Introduce them to the School Principal
 - (f) Introduce them to the Building Superintendent

Completed by: _____

FIGURE 18
Custodial Area Performance Report
 Mount Vernon Community School

Building _____

Custodian _____

Date ____ 19__

To be submitted with time cards.

Review Abbreviations:

DI - Dirty

WX - Needs Wax

WA - Needs Washing

DU - Dusty

CW - Cobwebs

HM - Head Maintenance

L - Littered

O - Organization

Pnt - Paint Needed

R - Repair

ITEM	ROOM OR AREA				REMARKS		
Baseboards							
Black Boards							
Blinds							
Book Cases							
Bulletin Boards							
Carpentry							
Chairs							
Chalk Trays							
Desks							
Door Glass							
Drinking Fountains							

ITEM	ROOM OR AREA				REMARKS		
File Cabinets							
Floors							
Handrails							
Mirrors							
Prides & Ducts							
Radiators							
Shelves							
Sinks							
Steps & Stairs							
Soap Dispensers							
Tables							
Telephones							
Terrazzo							
Toilet Bowls							
Towel Cabinets							
Transoms							
Urinals							

Building Principal _____ Custodian _____

FIGURE 19
Employee Performance Rating
University School District

Instructions

1. Complete the hourly employee performance rating form in duplicate. Retain the original copy in the employee's field personnel file. Forward the duplicate copy to Service Systems Corporation Headquarters, Attention: Personnel Records.
2. Each supervisor will complete an hourly employee performance rating for all hourly employees under the supervisor's jurisdiction (a) at least once annually or (b) when the supervisor or the employee is changing positions and/or locations and the supervisor will no longer have supervisory responsibility for the employee, provided a rating has not been completed within the previous three month period, (c) between 90-180 days after the new employee has been hired (orientation review) (d) when the employee is scheduled for a merit wage increase (e) when the employee is scheduled for a promotions or reclassification.
3. Complete the identification and informational data as required.
4. Item 1. Identify, list or state the specific accomplishments, if any, of the employee.
5. Item 2. Identify, list or state areas of improvement that the employee needs to attend to, if any, in order to perform at a higher level of excellence.
6. Item 3. Indicate, by placing a checkmark (4) in the proper performance description column your evaluation of the employee's performance for each of the rating factors listed. Definitions of the rating factors are stated in the Human Resources Manual.
7. Item 4. Identify and state any circumstances, conditions or factors which should be mentioned as having a bearing on the employee's performance which was not identified or explained above.
8. Item 5. *Performance* — Place a checkmark (4) on the line which most accurately reflects the performance of the employee this reporting period. If the summary appraisal is not basically consistent with the rating factors an explanation must appear in Item 4.
Development — Place a checkmark (4) in the box which most accurately reflects the developmental status of the employee as of the date of the rating
Training — List area(s) of training, if any, the employee should receive to increase employee's level of performance.
9. The rating supervisor will sign and date the hourly employee performance rating. If the rating official chooses to use this rating form as the basis for a discussion with the employee, of the employee's performance, the rating official may present the completed form to the employee for the employee's review. If the performance rating is reviewed by the employee, the employee may sign the performance rating as an acknowledgement of review by the employee. The rating official has the option to show the completed performance rating to the employee, or not, the employee has the option to acknowledge review of the performance rating by signing and dating the form. Irrespective of whether or not the employee is presented and/or acknowledges the performance rating, the rating official will forward the rating form to the next supervisory level for review by the rating official's supervisor. The reviewing supervisor will indicate concurrence or non-concurrence with the rating, and sign and date the form. If the reviewing supervisor does not concur with the rating, he should attach two copies of a memo of explanation to this form. Distribution of this completed form, and any attachments will be in accordance with Instruction 1, above.

FIGURE 19
Hourly Employee Performance Rating
 University School District

EMPLOYEE NAME (PRINT)		POSITION TITLE		SOCIAL SECURITY #		DATE	
DIVISION		LOCATION		CITY	STATE	DIV	PAYROLL UNIT #
REASON FOR RATING: ☐ PERIODIC REVIEW ☐ ORIENTATION REVIEW ☐ PROMOTION/RECLASSIFY ☐ MERIT ☐ SUPERVISORY CHANGE				HOW LONG HAS EMPLOYEE WORKED IN THIS UNIT? HOW LONG HAS EMPLOYEE WORKED IN THIS POSITION? HOW LONG HAS EMPLOYEE WORKED UNDER YOUR SUPERVISION? DID EMPLOYEE RECEIVE TRAINING DURING THIS REPORT PERIOD? YES NO HAS PERFORMANCE BEEN DISCUSSED WITH EMPLOYEE? YES NO			
1. WHAT SPECIFIC ACCOMPLISHMENTS AND ACHIEVEMENTS HAS THE EMPLOYEE CONTRIBUTED THIS REPORTING PERIOD?							
2. IN WHAT AREAS AND/OR IN WHAT WAYS DOES THE EMPLOYEE NEED TO IMPROVE TO ENHANCE PERFORMANCE?							
3. PERFORMANCE RATING FACTORS ☒							
RATING	INADEQUATE	ADEQUATE	MARGINAL	BELOW AVERAGE	ABOVE AVERAGE	EXCEPTIONAL	OUTSTANDING
A. WORK QUALITY	A	A	A	A	A	A	A
B. WORK	B	B	B	B	B	B	B
C. SAFETY/CONSCIOUSNESS	C	C	C	C	C	C	C
D. APPEARANCE	D	D	D	D	D	D	D
E. ATTENDANCE	E	E	E	E	E	E	E
F. PUNCTUALITY	F	F	F	F	F	F	F
G. DEPENDABILITY	G	G	G	G	G	G	G
H. COMMUNICATIONS ABILITY	H	H	H	H	H	H	H
I. JUDGEMENT	I	I	I	I	I	I	I
J. LOYALTY	J	J	J	J	J	J	J
K. INITIATIVE	K	K	K	K	K	K	K
L. ATTITUDE	L	L	L	L	L	L	L
4. STATE ANY OTHER FACTORS, CIRCUMSTANCE, OR CONDITIONS NOT INDICATED ABOVE WHICH HAS AN INFLUENCE ON THE EMPLOYEE'S PERFORMANCE RATING FOR THIS REPORTING PERIOD.							
4. SUMMARY							
PERFORMANCE ☒		DEVELOPMENT ☒		TRAINING			
MARGINAL		SHOULD CONTINUE IN PRESENT POSITION			THE EMPLOYEE SHOULD RECEIVE ADDITIONAL TRAINING IN:		
BELOW AVERAGE		CAPABLE OF ASSUMING SOME ADDITIONAL DUTIES					
AVERAGE		READY FOR ADDITIONAL RESPONSIBILITY					
EXCEPTIONAL		POSSESSES MANAGERIAL POTENTIAL					
OUTSTANDING							
RATER'S SIGNATURE		DATE					
EMPLOYEE'S SIGNATURE		DATE					
SUPERVISOR'S SIGNATURE/TITLE		☐ CONCUR ☐ NON CONCUR		DATE			

Policy Statements

In order to identify appropriate procedures for accomplishing the purposes of the plant operations and maintenance division, it is necessary to establish and disseminate procedures that are to be followed on a system-wide basis.

Areas where regulations are often deemed necessary are:

- slow removal
- trash removal
- painting
- work order procedures
- requisitioning procedures
- warehousing groundskeeping, etc.

Follicle is a typical regulation issued to accomplish a standardized paint selection procedure.

FIGURE 21
Standard Policy Format
Support Services
Building And Grounds Management
Requests For Maintenance And Repair

Notice 5102
Service Systems-Commiskey
November 15, 1979

Interior Painting Guidelines

The following are preliminary guidelines covering the standardization of painting of the interior of the district's school buildings. Building principals are to initiate requests for special painting cognizant of the long range building painting plans to cover all district buildings as part of their program operating plan special requests submitted in February each year. This does not include painting necessary to repair damage to buildings as a result of leaks and the like.

1. There will be six (6) basic colors available for selection:
 - a. blue - lt. pastel
 - b. green - lt. pastel
 - c. brown - lt. pastel
 - d. yellow - lt. pastel
 - e. white
 - f. off white

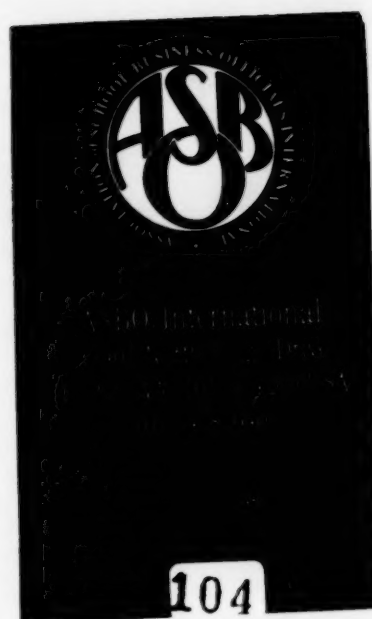
The selection of basic colors has been made in an effort to effect economies of scale in the purchase of paint, ability to match colors and do repair work, and capitalize on the reflective properties of certain colors to reflect light rather than absorb light resulting in energy savings.

These colors will be available in both a flat eggshell finish and in enamels. The flats are to be used for plastered, plasterboard-wood, etc., walls. The enamels for trim work, wainscotings, and the bottom four to five feet of walls in corridors.

2. Accent colors may be used within a room but must be limited to no more than 10 % of the total wall space being painted.
3. One wall of a room may be painted a slightly darker shade than the rest of the walls. This application, however, must be approved by both the principal and the Maintenance Department. The Maintenance Department will be stocking the base color, the color requests will be filled by tinting the base color within the Maintenance Department.

It is recognized that in some cases, due to the color combination currently in existence in the decor, such as floor and wall tile, some variations of the standard colors may be necessary. We will accommodate these on an individual basis. The basic plan for interior painting is once every six years. This will be implemented once the "catch-up" painting is completed to accommodate past leaks, breaks, malfunctions, etc.

Your understanding is appreciated.



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